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A

TREATISE

ON

THE VENEREAL DISEASE.

BY

JOHN HUNTER.

THE THIRD EDITION,

ENLARGED FROM THE MATERIALS LEFT BY THE AUTHOR FOR THAT PURPOSE;

WITH OCCASIONAL OBSERVATIONS OF THE EDITOR,

EVERARD HOME.

LONDON.

PRINTED BY W. BULMER AND CO. CLEVELAND-ROW,

FOR G. AND W. NICOL, BOOKSELLERS TO HIS MAJESTY,

PALL-MALL.

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SIR GEORGE BAKER, BART.

PHYSICIAN TO HER MAJESTY,

PRESIDENT OF THE COLLEGE OF PHYSICIANS,

AND

FELLOW OF THE ROYAL SOCIETY,

THIS WORK

IS INSCRIBED

AS A MARK OF ESTEEM,

BY HIS FRIEND, AND

HUMBLE SERVANT,

Leicester-Square,
March 30, 1786.

JOHN HUNTER.

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INTRODUCTION.

I AM induced by two motives to publish the following Treatise: in the first place, I am in hopes, that several new observations contained in it will be deemed worthy of the public attention; in the next place, I am desirous to have an opportunity of asserting my right to some opinions that have made their way into the world under other names.

There are many opinions respecting the animal œconomy peculiar to myself, which are frequently referred to in the course of the work. It is therefore necessary to give a short explanation of some of them, that the terms made use of may be better understood.

I. OF SYMPATHY.

I DIVIDE sympathy into two kinds; *universal*, and *partial*.

Universal sympathy is, when the whole constitution sympathises with some sensation or action. Partial sympathy is, when one or more distinct parts sympathise with some local sensation, or action.

The universal sympathies are various in different diseases; but those that we have in the venereal disease are principally two; the symptomatic fever, and the hectic fever. The symptomatic fever is an immediate effect of some local injury, and seldom takes place in the venereal disease in any great degree under any of its forms, except in the case of a swelled testicle, which is itself an instance of a partial sympathy; the symptomatic fever here, therefore, is an universal sympathy arising from a partial one. The hectic fever is an universal sympathy with a local disease, which the constitution is not able to overcome. This

takes place oftener and in a greater degree in the *lues venerea* than in any other form of the disease.

Partial sympathy I divide into three kinds; the *remote*, the *contiguous*, and the *continuous*. The remote is, where there appears to be no visible connection of parts that can account for such effects, as the pain of the shoulder in an inflammation of the liver. The contiguous is that which appears to have no other connection than what arises from vicinity or contact of separate parts; an instance of which we have, in the stomach and intestines sympathising with the integuments of the abdomen. The continuous is, where there is no interruption of parts, and the sympathy runs along from the irritating point, as from a centre, which is the most common of all the sympathies; and we have an example of it in the spreading of inflammation.

II. OF DISEASED ACTIONS BEING INCOMPATIBLE WITH EACH OTHER.

The venereal disease is not only suspected to be present in many cases, where the nature of the disorder is not well marked, but it is supposed that it can be combined with other diseases, such as the itch and the scurvy: thus we hear of *pocky* itch, and of scurvy and the venereal disease combined; but this supposition appears to me to be founded in ignorance. I have never seen any such cases, nor do they seem to be consistent with the principles of diseased action in the animal œconomy. It appears to me, that no two actions take place in the same constitution, or in the same part, at one and the same time. No two different fevers exist in the same constitution, nor two local diseases in the same part at the same time; yet as the venereal disease, when it attacks the skin, is very similar to those diseases which are vulgarly called scorbutic, they are often supposed to be mixed, and to exist in the same part.

What has been called a scorbutic constitution, is no more than a constitution very susceptible of an action producing eruptions on the skin, whenever an immediate cause shall take place; and there are some parts of the body more susceptible of this than others, in which therefore

a slighter immediate cause is sufficient to excite the action; but the circumstance of a constitution's being susceptible of one disease, does not hinder it from being susceptible of others. A man may have the lues and the small-pox at the same time; that is, parts of his body may have been contaminated by the venereal poison, and the small-pox may take place, and both may appear together, but not in the same parts. If both were consequences of fever, and each followed the fever nearly about the same time; then, it would be impossible for both to have their respective eruptions, even in different parts, at the same time; for it is impossible for the preceding fevers to have been coexistent.

From this principle, I think I may fairly put the following queries. Does not the failure of inoculation, and the power of resisting many infections, arise from the person's having, at the same time, some other disease, and therefore being incapable of a new action? Does not the great difference in the time, from the application of the cause, to the appearance of the disease, in many cases, depend upon the same principle? For instance, a person is inoculated, and the puncture does not inflame for fourteen days, which I have seen; and is it not because there is another disease in the constitution at the time of inoculation? Does not the cure of some diseases depend upon the same principle, as the suspension, or cure of a gonorrhœa by a fever?

Let me illustrate this principle still further, by one of many cases which have come under my own observation. On Thursday, the sixteenth of March, one thousand seven hundred and seventy-five, I inoculated a gentleman's child; it was observed, that I made pretty large punctures. On the Sunday following, the nineteenth, he appeared to have received the infection; a small inflammation or redness appearing round each puncture, and a small tumour above the surface of the skin having taken place. On the twentieth, and the twenty-first, the child was feverish; but I declared itwas not the variolous fever, as the inflammation had not all advanced since the nineteenth. On the twenty-second, a considerable eruption appeared, which was evidently the measles; the sores on the arms appeared to go back, becoming less inflamed. On the twenty-third, he was very full of the measles; the punctures on the

arms being in the same state as on the preceding day. On the twenty-fifth, the measles began to disappear. On the twenty-sixth, and twenty-seventh, the punctures began again to look a little red. On the twenty-ninth, the inflammation increased, and there was a little matter formed. On the thirtieth, he was seized with fever. The small-pox appeared at the regular time, went through its usual course, and terminated favourably. In like manner, it may be observed, that the venereal disease makes its appearance at different periods after infection. Is not this explicable on the same principle?

The Editor feels it to be his duty to state, that since Mr. Hunter's death, an account of two cases, shewing the existence of the small-pox, and the measles, in the same person at the same time, by Dr. Patrick Russel, has been published in the second volume of the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge; which shews that this law in the animal œconomy, however general, is not without its exceptions.

III. OF THE COMPARATIVE POWERS OF DIFFERENT PARTS OF THE BODY—FROM SITUATION—FROM STRUCTURE.

We shall have occasion to observe, that the parts affected take on the action more readily, and go on more rapidly with it, when near to the source of the circulation, than when far from it; for the heart exerts its influence upon the different parts of the body, in proportion to their vicinity to it; and the more distant the parts are, the weaker are their powers.

This is, perhaps, better illustrated by disease than by any actions in health; for in health we have no comparative trials, as no two parts of the machine, at unequal distances from the heart, can be thrown into equal action, and therefore no conclusions can be drawn. I may just observe, that all the vital parts are near the heart.

In diseases we see mortification, arising from debility, taking place in the extremities oftener than in other parts, more especially if the person is tall; the heart not propelling the blood to these distant parts

with equal force. In such a state of constitution, those who labour under a hemiplegia, are often found to die at last, from mortification taking place in the extremities of the paralytic side. In some of those cases the arteries give way, and allow of extravasation of the blood, and therefore we may reasonably suppose, that they are proportionally weak in health. We also find, that such extravasation commonly begins in the extremities. This principal is not only evident in these two diseases, but also in every disease that can affect an animal body. It appears in the readiness with which diseases come on, and proceed, in parts distant from the source of the circulation; and also in the steps towards a cure.

Parts differ not only in their powers, in proportion as they are nearer or further from the heart, but likewise according to their peculiar structures, whereby they vary as much in the progress of diseased actions as in the operations of health.

An animal body is composed of a variety of substances, as muscle, tendon, cellular membrane, ligament, bone, nerve, &c.; we have therefore an opportunity of observing the comparative progress of diseases in them, and their comparative powers of performing a cure; and we find that they differ very much from one another in those respects. How far these differences take place in all diseases I have not been able to determine; but should suppose, that in specific diseases, as scrofula and cancer, there is in general no difference in the mode of action in any of the structures,* these diseases producing the same specific effects in all the parts that are capable of being affected by them; but in diseases arising from accident, a great difference in the degrees of action takes place; the parts from such a cause being allowed to act according to their natures, which holds good also in the venereal disease. This difference appears to be chiefly in the degrees of strength and weakness in resisting diseased action. The less the natural powers of action are in any particular structure of parts, the less they are able to resist disease;

* Here it is to be understood, that we do not include those parts which have a greater tendency to specific diseases than what many others have, as the lymphatics to the scrofula, the breast to the cancer.

therefore bone, tendon, ligament, and cellular membrane go through their diseased actions more slowly than muscle or skin; and this principle is applicable to the venereal disease.

IV. OF PARTS SUSCEPTIBLE OF PARTICULAR DISEASES.

There are some parts much more susceptible of specific diseases than others. Poisons take their different seats in the body as if allotted for them. Thus we have the skin attacked with what are vulgarly called scorbutic eruptions, and many other diseases; it is also the seat of the small-pox and the measles; the throat is the seat of action in the hydrophobia and the hooping-cough. The scrofula attacks the absorbent system, especially the glands. The breasts, testicles, and the conglomerate glands are the seat of cancer The skin throat and nose are more readily affected by the *lues venerea* than the bones and periosteum, which, on the other hand, suffer sooner than many other parts, particularly the vital parts, which perhaps are not at all susceptible of this disease.

V. OF INFLAMMATION.

I consider common inflammation to be an increased action of the smaller vessels of a part joined with a peculiar mode of action, by which they are enabled to produce the following effects; to unite parts of the body to each other; to form pus; and to remove parts of the solids. These effects are not produced by a simple increase of action or enlargement of the vessels, but by a peculiar action, which is at present perhaps not understood.

These three effects of inflammation I have called, distinct species of inflammation. That which unites parts I have called, the *adhesive inflammation;* that which forms pus, *the suppurative inflammation;* and that which removes parts, the *ulcerative inflammation.*

In the adhesive inflammation the arteries throw out coagulable lymph which becomes the bond of union; this however is not simply extravasated, but has undergone some change before it leaves the arteries, since

in inflamed veins it is found lying coagulated upon the internal surface of the vessel, which could not have happened if simply extravasated. In the suppurative inflammation a still greater change is produced upon the blood before it is thrown out by the arteries, whereby it is formed into pus; which change is probably similar to secretion. In the ulcerative inflammation the action of the arteries does not remove the parts; that office is performed by the absorbent vessels which are brought into action.

In the two first species of inflammation there must be a change in the disposition and mode of action of the arteries; for the suppurative cannot be considered as simply an increase of the action of the adhesive, as its effects are totally different; but in the third species there is probably no change of action in the arteries from that of the second, the action of the absorbents being superadded, by which solid parts and of course the arteries themselves are removed.

VI. OF MORTIFICATION.

Mortifications are of two kinds, one preceded by inflammation, the other not; but as the cases of mortification, which will be mentioned in this work, are all of the first kind, I shall confine my observations to that species.

I consider inflammation as an increased action of that power which a part is naturally in possession of; this increased action in healthy inflammations at least is probably attended with an increase of power: but in inflammations which terminate in mortification there is no increase of power; on the contrary, there is a diminution of power, which joined to an increased action becomes the cause of mortification, by destroying the balance which ought to subsist between the power and action of every part.

If this account of mortifications be just, we shall find it no difficult matter to establish a rational practice; but before we attempt this, let us just take a view of the treatment hitherto recommended, and see how far it agrees with our theory.

It is plain from the common practice that the weakness has been attended to, but it is as plain that the increased action has been overlooked; and therefore the whole aim has been to increase the action with a view to remove the weakness. The Peruvian bark, confectio cardiaca serpentaria, &c. have been given in as large quantities as the case appeared to require, or the constitution could bear; by which means an artificial or temporary appearance of strength has been produced, while it was only an increased action. The cordials and wine, upon the principle on which they have been given, are rationally administered; but there are strong reasons for not recommending them, arising from the general effect which all cordials have of increasing the action without giving real strength; and the powers of the body are afterwards sunk proportionally as they have been raised, by which nothing can be gained but a great deal may be lost; for in all cases if the powers are allowed to sink below a certain point, they are irrecoverable.

The local treatment has been as absurd as the constitutional; scarifications have been made down to the living parts, that stimulating and antisceptic medicines might be applied to them, as turpentines, the warmer balsams, and sometimes the essential oils; warm fomentations have been also applied as congenial to life, but warmth always increases action, and stimulants are improper where the actions are already too violent.

Upon the principles here laid down, the bark is the only medicine that can be depended upon, as it increases the powers and lessens the actions. Upon many occasions opium will be of singular service by lessening the action, although it does not give real strength: I have seen good effects from it both when given internally in large doses, and when applied to the part. Keeping the parts cool is proper, and all the applications should be cold. The above practice is to be kept in view in mortifications that happen in the venereal disease.

PART I.

CHAPTER I.

OF THE VENEREAL POISON.

The venereal disease arises from a poison, which as it is produced by disease, and is capable of again producing a similar disease, I call a morbid poison to distinguish it from the other poisons, animal, vegetable, and mineral.

The morbid poisons are many, and they have different powers of contamination. Those which infect the body, either locally or constitutionally, but not in both ways, I call *simple*. Those which are capable of affecting the body, both locally and constitutionally, I call *compound*. The venereal poison when applied to the human body, possesses a power of propagating or multiplying itself; and as it is also capable of acting both locally and constitutionally, it is a compound morbid poison. Like all such poisons, it may be communicated to others in all the various ways in which it can be received, producing the same disease in some one of its forms.

I. OF THE FIRST ORIGIN OF THE POISON.

Though the first appearance of this poison is certainly within the period of modern history, yet the precise time and manner of its origin has hitherto escaped our observation; and we are still in doubt, whether it arose in Europe, or was imported from America. I shall not attempt to discuss this question, and those who wish to examine at length the facts,

authorities and arguments brought in favour of the latter opinion, may consult Astruc; and for the former a short treatise* published in one thousand seven hundred and fifty-one, without a name. The author of this treatise appears to have considered the subject very fully, and as far as reasoning goes on a subject of this kind, proves that the disease was not brought from the West-Indies: not contented with this, he goes on to account for its first rise in Europe; but in this he is not equally successful. The subject is a difficult one; and the want of a sufficient number of facts leaves too much room for conjecture.

We shall not therefore enter further into this question, nor is it material to know at what period and in what country this disease arose; but we may in general affirm, that as animals are not naturally formed with disease, nor so as to run spontaneously into diseased actions; but with a susceptibility of such impressions as produce diseased actions; diseases must always arise from impressions made upon the body: and as man is probably susceptible of more impressions that become the immediate cause of disease, than any other animal, and is besides the only animal which can be said to form artificial impressions upon himself, he is subject to the greatest variety of diseases. In one of those self-formed situations therefore the impression most probably was given, which produced the venereal disease.

II. IT BEGAN IN THE HUMAN RACE, AND IN THE PARTS OF GENERATION.

In whatever manner it arose, it certainly began in the human race; as we know no other animal that is capable of being infected with this poison. It is probable too, that the parts of generation were the first affected: for if it had taken place in any other part of the body it might

* Intitled, "A Dissertation on the Origin of the Venereal Disease; proving that it was not brought from America, but began in Europe from an epidemical Distemper; translated from the original Manuscript of an eminent Physician. London, printed for Robert Griffiths, 1751."

probably never have gone farther than the person in whom it first arose; and therefore never have been known; but being seated in the parts of generation, where the only natural connection takes place between one human being and another, except the mother and child, it was in the most favourable situation for being propagated; and as we shall find hereafter in the history of the disease itself, that no constitutional effect of this poison can be communicated to others, we are led of necessity to conclude that its first effects were local.

III. OF THE NATURE OF THE POISON.

We know nothing of the poison itself, but only its effects on the human body. It is commonly in the form of pus, or united with pus, or some such secretion, and produces a similar matter in others, which shows that it is most generally, although not necessarily, a consequence of inflammation. It produces or excites therefore in most cases an inflammation in the parts contaminated; besides which inflammation the parts so contaminated have a peculiar mode of action superadded, different from all other actions attending inflammation; and it is this specific mode of action which produces the specific quality in the matter. It is not necessary that inflammation should be present to keep up this peculiar mode of action, because the poison continues to be formed long after all signs of inflammation have ceased. This appears from the following facts: men having only what is called a gleet, or a healing chancre, give the disease to sound women: and many venereal gonorrhœas happen without any visible signs of inflammation.

In women the inflammation is frequently very slight, and often there is not the least sign of it; for they have been known to infect men though they themselves have had no symptoms of inflammation, or of the disease in any form. Therefore the inflammation and suppuration, when present, are only attendants on the peculiar mode of action; the degree in which they take place depending more on the nature of the constitution than on that of the poison.

The formation of matter also, though a very general, is not a constant attendant on this disease; for we sometimes find inflammation produced by the venereal poison which does not terminate in suppuration; such inflammation I suspect to be of the erysipelatous kind. It is the matter produced, whether with or without inflammation, which alone contains the poison; for without the formation of matter, no venereal poison can exist. Therefore a person having the venereal irritation in any form not attended with a discharge, cannot communicate the disease to another. To communicate the disease therefore, it is necessary that the venereal action should first take place, that matter should be formed in consequence of that action, and that the matter should be applied to a sound person or part.

That the venereal disease is to be propagated only by matter is proved every day by a thousand instances. Married men contract the disease, and not suspecting that they have caught it, cohabit with their wives, even for weeks. Upon discovering symptoms of the disease they of course desist; yet in all my practice I never once found that the complaint was communicated under such circumstances, except where they had not been very attentive to the symptoms, and therefore continued the connection after the discharge had appeared. I have gone so far as to allow husbands to cohabit with their wives in order to save appearances, and always with safety.

The matter which is impregnated with this poison, when it comes in contact with a living part, irritates that part, and inflammation is the common consequence. It must be applied either in a fluid state, or rendered fluid by the juices of the part to which it is applied. There is no instance where it has given the infection in the form of vapor, as is the case in many other poisons.

IV. OF THE GREATER OR LESS ACRIMONY OF THE POISON.

Venereal matter must in all cases be the same; one quantity of matter cannot have a greater degree of poisonous quality than another, and if there is any difference it is only in its being more or less diluted, which

produces no difference in its effects. One can conceive however, that it may be so far diluted as not to have the power of irritation. Thus any fluid taken into the mouth, capable of stimulating the nerves to taste, may be so diluted as not to be tasted. But if the poison can irritate the part to which it is applied to action, it is all that is required; the action will be the same whether from a large or small quantity, since those men who have taken great pains in washing the parts, immediately after connection, have caught the disease, and the symptoms have been equally severe as in others who used no such precaution.

We find from experience, that there is no difference in the kind of matter; and no variation can arise in the disease from the matter's being of different degrees of strength; for it appears that the same matter affects very differently different people. Two men having been connected with one woman, and both catching the disease, one of them shall have a violent gonorrhœa or chancre, while the other shall have merely a slight gonorrhœa. I have known one man give the disease to different women, and some of the women have had it very severely, while in others it has been very slight. The same reasoning holds good with regard to chancres. The variations of the symptoms in different persons depend upon the constitution and habit of the patient at the time. What happens in the inoculation of the small pox strengthens this opinion. Let the symptoms of the patient from whom the matter is taken be good or bad, let it be from one who has had a great many pustules, or from one who has had but few; let it be from the confluent or distinct kind, applied in a large quantity or a small one, it produces always the same effect. This could only be known by the great numbers that have been inoculated under all these different circumstances.

The Editor considers the last assertion to remain unproved, since he has in many instances diluted the variolous matter, and always found that the disease produced from such matter was milder than when employed for inoculation in its undiluted state.

V. OF THE POISON BEING THE SAME IN GONORRHOEA AND IN CHANCRE.

It has been supposed by many that the gonorrhœa and the chancre arise from two distinct poisons; and their opinion seems to have some foundation, when we consider only the different appearances of the two diseases, and the different methods of cure; which in judging of the nature of many diseases is too often all we have to go by. Yet if we take up this question upon other grounds, and also have recourse to experiments, the result of which we can absolutely depend upon, we shall find this notion to be erroneous.

If we attend to the manner in which the venereal poison was communicated to the inhabitants of the island in the South-Seas, there are many circumstances which tend to throw light upon the present question. It has been supposed, as no mention is made of a gonorrhœa at Otaheite, that it must have been the chancre that was first introduced into that island; and that of course nothing but a chancre could be propagated there; for as no gonorrhœa had been communicated no such disease could take place. But if we were to reason upon all the probable circumstances attending the voyages to that part of the world we should conclude the contrary; for it was almost impossible to carry a chancre so long a voyage without its destroying the penis; while we know from experience, that a gonorrhœa may continue for a great length of time. It is mentioned in Cook's voyage, that the people of Otaheite, who had this disease, went into the country and got cured; but when it turned into a pox it was then incurable: this shews that the disease which they had must have been a gonorrhœa, for we know that it is only a gonorrhœa that can be cured by simple means; and further, if it had been a chancre, and they had been acquainted with the means of curing it, they could also have cured the *lues venerea*.

Wallis left Plymouth in August 1766, and arrived at Otaheite in July 1767 eleven months after his embarkation; and if none of his

men had the disease when he sailed, there was hardly a possibility of their contracting it any where afterwards in the voyage; this appears to be too long for a gonorrhœa to last. But let us suppose even that Wallis carried it thither in his ship, and that one or two of his crew had it; as he staid there five weeks, it was very possible, even very probable, that such person or persons might have communicated it so quickly as to have become the cause of contamination of the whole crew of his ship; but as this did not happen, it is a presumptive proof that Wallis did not carry it thither.

Bougainville left France in December 1766, but he touched at several places where some of his people might have got the disease; the last of which was Rio de la Plata, which he left in November 1767, and arrived at Otaheite in April 1768, five months after. This interval of time agrees better with the usual continuance of the disease than the length of Wallis's voyage, and therefore, from this circumstance, it becomes more probable that Bougainville carried it thither. Besides, it is likely that he could guard his people less against the disease than Wallis, for Wallis could have his choice of men at his first setting out, which was all that was necessary to prevent his carrying the disease with him, for he ran no risk of contracting it afterwards: but although Bougainville had the same advantage at first, yet he had it not afterwards, for his men were in the way of infection in several places, and he had no opportunity of changing them, and probably no great chance of having them cured. The circumstance of the disease being found by Bougainville at Otaheite soon after his arrival, is a kind of proof that he carried it thither himself; for, I observed before, that, if Wallis had carried it by one man only, this man could in a very few days have so far propagated it, as to have spread it through the whole ship's crew; and as Bougainville arrived at the island ten months after Wallis, there was a sufficient time for the inhabitants of the whole island to have been infected, and the ravages of the disease must have been evident to them immediately upon their arrival. Bougainville remained only nine days at the island of Otaheite, and observed nothing of the disease till some weeks after his departure, when it was found

that several of the crew were infected, which most probably must have happened in consequence of the poison being carried there by some of his own people. It is also mentioned by Cook, that the Otaheiteans ascribed the introduction of the disease to Bougainville; and we can hardly suppose that they would be so complaisant to our countrymen as to accuse Bougainville, when they must have known whether the disease was imported by Wallis or not, especially as they had no reason to be partial in favour of the people who accompanied the latter. But as we find in Cook's last voyage, that the disease in every form is now there, and as we have no new intelligence of a gonorrhœa being since introduced, we must suppose that every form of the disease has been propagated from one root, which most probably was a gonorrhœa.

If any doubt still remain with respect to the two diseases being of the same nature, it will be removed by considering that the matter produced in both is of the same kind, and has the same properties, the proofs of which are, that the matter of a gonorrhœa will produce either a gonorrhœa, a chancre, or the *lues venerea*; and the matter of a chancre will also produce either a gonorrhœa, a chancre, or the *lues venerea*.

That chancre is sometimes the consequence of gonorrhœa is rendered probable by the following case:

A. B. had a gonorrhœa about the beginning of January 1788; the inflammation went off, the discharge continued; about a month after, a chancre appeared on the glans penis, for which he took mercury, and it got well in about a month.

The following case is an instance of a gonorrhœa producing a *lues venerea*. A gentleman twice contracted a gonorrhœa, of which he was cured both times without mercury. About two months after each he had symptoms of the *lues venerea*; those in consequence of the first infection were ulcers in the throat, which were removed by the external application of mercury; the symptoms in consequence of the second were blotches on the skin, for which also he used the mercurial ointment, and was cured. We have too many examples of chancres producing the *lues venerea*.

Since it should appear from the above, that the gonorrhœa and

chancre are the effects of the same poison, it may be worthy of inquiry, to what circumstances two such different forms of the disease are owing.

To account for these two very different effects of the same poison, it is only necessary to observe the difference in the mode of action of the parts affected when irritated, let the irritation be what it may. The gonorrhœa always proceeds from a secreting surface,* and the chancre is formed on a non-secreting surface; and in this last, the part to which the poison is applied must become a secreting surface before matter can be produced. All secreting surfaces in the body being probably similar, one mode of application only is necessary to produce this disease in them all, which is by the poisonous matter simply coming in contact with them. But to produce the chancre, the venereal matter may be applied in three different ways; the first and most certain is by a wound, into which it may be introduced; the second is by applying the matter to a surface with a cuticle, and the thinner that is, it allows the matter to come more readily to the cutis; and the third is, by applying the matter to a common sore already formed.

The poison then being the same in both cases, why do they not always happen together in the same person? for, one would naturally suppose, that the gonorrhœa, when it had taken place, could not fail to become the cause of a chancre, and that this, when it happened first, would produce a gonorrhœa. Although it does not often happen so, yet it sometimes does, at least there is great reason to believe so. I have seen cases where a gonorrhœa came on, and in a few days after in some, in others in as many weeks, a chancre has appeared: and I have also seen cases where a chancre has come first, and in the course of its cure a

* By *secreting surfaces* I mean all the passages for extraneous matter, including all the ducts of glands, such as the mouth, nose, eyes, anus, and urethra; and by *non-secreting surfaces*, the external skin in general. To which I may add a third kind of surface leading from the one to the other, as the glans penis, prolabium of the mouth, the inside of the lips, the pudendum; which surfaces partaking of the properties of each, but in a less degree, are capable of being affected in both ways, sometimes by being excited to secretion, and at other times to ulceration.

running and pain in making water have succeeded. It may be supposed that the two diseases arose from the original infection, and only appeared at different times; and their not occurring oftener together would almost induce us to believe it was so, since the matter is the same in both, and therefore capable of producing either the one or the other.

I suspect that the presence of one irritation in these parts becomes in general a preventive of the other. I have already observed, that the two parts sympathise in their diseases; and it is possible that, that very sympathy may prevent the appearance of the real disease; for if an action has already taken place which is not venereal, it is probable that this sympathy will not cease while the cause exciting it exists; and therefore when both happen in the same person at the same time, I suspect that either the urethra never had sympathised with the chancre, or if it did at first that the sympathy had ceased, and then the venereal matter might stimulate the parts to action.

VI. OF THE CAUSE OF THE POISONOUS QUALITY—FERMENTATION—ACTION.

As the consideration of this point, and the being able to account for it, will throw some light upon the disease, and cure, I may be allowed to dwell a little upon it. It has been supposed by some, that the poisonous quality of the matter arises from a fermentation taking place in it as soon as it is formed. But whether this poisonous quality arises from that cause; or whether the animal body has a power of producing matter according to the irritation given, whereby the living powers, whenever irritated in a particular manner, produce such an action in the parts as to generate a matter similar in quality to that, which excited the action, is what I am now to consider.

In the examination of this subject I shall confine myself to the gonorrhœa. In support of either of the two opinions, it must be supposed that the venereal matter has by its specific properties, a power of irri-

tation beyond common matter. I have already observed, that it has the power of exciting inflammation even on the common skin, and of forming a chancre, which power is not possessed by common matter. In the first opinion it must be supposed, that there is no specific inflammation or suppuration produced by the application of the venereal matter, but only a common inflammation and suppuration, and that the matter capable of producing these effects acts as a ferment upon the new formed matter, rendering it venereal as soon, or nearly as soon as it is formed; and as there is a succession of secretions, there immediately follows a succession of fermentations. Now, let us see how far this idea agrees with all the variety of phænomena attending the disease. First, it may be asked, what becomes of this ferment in many cases where the suppuration does not come on for some weeks after the irritation and inflammation have taken place? In such cases we can hardly suppose the original venereal matter to remain, and to act as a ferment. Secondly, when there is a cessation of the discharge and no matter formed, which sometimes happens for a considerable time, and yet all the symptoms recur, what is it that produces this fermentation a second time? Nothing can, but a new application of fresh venereal matter. When, for example, the irritation is translated to the testicle; and the discharge is totally stopped, as often happens, what becomes of the virus; and how is a new virus formed when the irritation falls back upon the urethra? Thirdly, if the poisonous quality were produced by fermentation taking place in the matter already formed, it would not be an easy matter to account for the symptoms ever ceasing; for according to my idea of a ferment, it would never cease to act, if new matter were continually added; nor could any thing possibly check it, but a substance immediately applied to the part, which could stop or prevent the fermentation taking place in the new matter. But as the veneral inflammation, in this species of the disease, is not kept up beyond a certain time, the production of the poison cannot depend on fermentation. Fourthly, if it depended on a fermentation taking place in the secreted matter, all venereal cases would be alike, nor would one be worse than another, except from a greater or smaller number

of fermenting places. Upon this supposition also, all cases would be equally easy of cure, for the fermentation would be equally strong in a slight case as in a bad one; it can only be fermentation in the matter after it has left the vessels; and the matter of every sore or secreting surface would become venereal, by applying venereal matter to it, which does not happen.

When the venereal matter has been applied to a sore, so as to irritate, it produces a venereal irritation and inflammation. But even this does not always take place, for the common matter from the sore may remove the venereal matter applied, before it can affect the sore, so as to produce the venereal inflammation and suppuration there. This experiment I have made several times, and never could produce the venereal inflammation but once. But if the venereal matter were capable of acting as a ferment, then it would in all cases produce venereal matter, without altering the nature of the sore.

The effects produced by the venereal poison appear to me to arise from its peculiar, or specific irritation, joined with the susceptibility of the living principle to be irritated by such a cause, and the parts so irritated acting accordingly. I shall therefore consider it as a poison, which by irritating the living parts in a manner peculiar to itself, produces an inflammation peculiar to that irritation, from which a matter is produced peculiar to the inflammation. Let us consider how far this opinion agrees with the various phænomena attending the disease.

First, the venereal matter having a greater power of irritating than common matter, approaches nearer to the idea of irritation than of fermentation. Secondly, its producing a specific disease, with specific symptoms and appearances, shows that it has a specific power of irritation, the living powers necessarily acting according to that irritation. Thirdly, the inflammation having its stated time of appearing and terminating, is agreeable to the laws of the animal œconomy in most cases, as it is a circumstance that takes place in other diseases that have a crisis; and when the disease is longer of duration in some than in others, it is because they are much more susceptible of this kind of irritation, and there may be perhaps other concurrent circumstances.

Fourthly, the venereal inflammation being confined to a specific distance is more agreeable to the idea of a specific irritation, than that of a fermentation. Fifthly, we have a further proof of this opinion, from the appearance of the disease being translated from one part of the body to another, as in the case of the swelled testicle, in which the discharge is often stopped or otherwise affected. Sixthly, the discharge often stops from the constitution being attacked by a fever, and returns after some days or weeks, or not at all, according to the continuance of the fever: now we can plainly see why the fever should put a stop to the discharge, as the disposition produced by it in a part is very different from that disposition, which formed the matter; and we can plainly see why the same disposition to form matter should often return; but how that return should be venereal, upon the principles of fermentation, we do not see. Seventhly, the production by art of an irritation of another kind, which is not specific, removes the specific irritation; now an irritation of another kind cannot prevent the fermentation from going on, but may destroy the venereal irritation. Eighthly, the circumstance of particular parts of our body being much more readily irritated than others by the venereal poison, when in the constitution, shows that it arises from an irritation, and that of a particular kind. Ninthly, some animals are not susceptible of the venereal irritation; for repeated trials have shewn that it is impossible to give it to a dog, a bitch, or an ass.* It is much easier to suppose, that a dog or an ass is not susceptible of many irritations of which the human body is, which we find to be the case in other specific diseases, and most poisons, than that matter of the human body is susceptible of a change, of which that of the dog or ass is not.

This argument is still further supported by comparing the venereal poison with other morbid poisons. The animal poison, productive of

* I have repeatedly soaked lint in matter from a gonorrhœa, chancre, and bubo, and introduced it into the vagina of bitches, without producing any effect. I have also introduced it into the vagina of asses, without any effect. I have introduced it under the prepuce of dogs without any effect. I have also made incisions and introduced it under the skin, and it has only produced a common sore. I have made the same experiment upon asses, with the same result.

the hydrophobia, seems to be owing to a particular irritation affecting certain parts, which shews, that if the body or any part of the body is irritated, it takes on a disposition to act in a peculiar manner, and that this mode of action is capable of secreting such juices as will throw another animal into the same action. In the hydrophobia the throat and its glands are particularly affected; and how the saliva should become of such a nature from the same kind of matter being either carried into the constitution, or perhaps only by the general sympathy of the constitution with a local affection, and more particularly with the parts about the throat, is not easily to be accounted for, without supposing either that the absorbed poison circulating can produce a specific constitutional action capable of affecting the throat and glands there, just as the poison of the small pox affects the skin, or that the circulating poison has power to affect or irritate the glands of the mouth only, or that those parts only are capable of immediately sympathising with the part irritated, as the muscles of the lower jaw are when they produce the locked jaw.

If this theory is just, it accounts for epidemical diseases arising from seasons, air, &c. irritating in such a manner, as to produce a fever, the effluvia of which shall irritate in the same manner; for it is not in the least material how the original irritation arises, it is only necessary that the animal should act according to the stimulus given by that irritation.

CHAPTER II.

THE MODE OF VENEREAL INFECTION.

Every infectious disease has its peculiar manner of being caught, and among mankind there is generally something peculiar in the way of life, or some attending circumstance which exposes them at one time or other to contract such diseases, and which, if avoided, would prevent their propagation. The itch, for instance, is generally caught by a species of civility, the shaking of hands, therefore the hand is most commonly the first part affected. And as the venereal poison is generally caught by the connection between the sexes, the parts of generation commonly first suffer; from this circumstances people do not suspect this disease when the symptoms are any where else, while they always suspect it in every complaint of those parts.

In the lower class of people, one as naturally thinks of the itch when there is an eruption between the fingers, as we do in young men of the venereal disease from the genitals being affected; but as every secreting surface, whether cuticular or non-cuticular, as was explained before, is liable to be infected by the venereal poison when it is applied to them, it is possible for many other parts besides the genitals to receive this disease; therefore it appears in the anus, mouth, nose, eyes, ears, and, as has been said, in the nipples of women from giving suck to children who have it in their mouths; which children have been infected in the birth from the parts of the mother being diseased.

CHAPTER III.

OF THE DIFFERENT FORMS OF THE DISEASE.

The venereal poison is capable of affecting the human body in two different ways; locally, that is, in those parts only to which it is first applied; and constitutionally, that is, in consequence of the absorption of the venereal pus which affects parts while diffused in the circulation.

Between the first and second kind, or the local and constitutional,* certain intermediate complaints take place in the progress of absorption; these are inflammations and suppurations, forming what are called buboes, in which the matter is of the same nature with that of the original disease.

When the matter has got into the constitution, and is circulating with the blood, it there irritates to action. There are produced from that irritation many local diseases, as blotches on the skin, ulcers in the tonsils, thickening of the periosteum and bones.

The local, or first kind, is what I have called *immediate*, arising immediately upon the application of venereal pus. Of this kind there are two sorts seemingly very different from one another. In the first there is a formation of matter without a breach in the solids, called a gonorrhœa. In the second there is a breach in the solids, called a chancre. Neither of these two ways in which the disease shews itself is owing to any thing peculiar in the kind of poison applied, but to the difference in the parts contaminated.

The readiness with which the parts run into violent action, in this

* I have called this form of the disease, constitutional; yet it is not strictly so, for every complaint in consequence of it is truly local, and is produced by the simple application of the poison to the parts.

species of inflammation, is greater or less acording to the nature of the parts affected; which perhaps does not arise from any specific difference in the parts, but is according to the common principle of sensibility and irritability; for we find that the vagina is not so much disposed to inflammation in this disease, as the urethra is in the same sex, because it is not so sensible. However, it is possible there may be some specific disposition to irritation and inflammation in the urethra in man; and, what would incline me to think so, is, that this canal is perhaps oftener out of order than any other, producing a great variety of symptoms.

I. VARIETIES IN DIFFERENT CONSTITUTIONS.

This disease, when it appears in the form either of a gonorrhœa or a chancre, differs very much in the violence of its symptoms in different people. In some it is extremely mild, in others extremely violent. When mild, it is generally simple in its symptoms, having but few and those of no great extent, being much confined to the specific distance: but when violent it becomes more complicated in its symptoms, having a greater variety, and extending itself beyond the specific distance. This does not arise from any variety in the specific virtue of the poison, but from a difference in the disposition and mode of action of the body, or parts of the body; some being hardly susceptible of this or any irritation, others being very susceptible of it, and of every other irritation, so as readily to run into violent action.

The venereal irritation however does not always follow these rules; for I have known young men, in whom a sore from common accident healed up readily, yet the irritation attending a gonorrhœa would be violent, and a chancre would inflame and spread with great rapidity, and even mortify. On the other hand, I have known young men in whom a sore from common violence has been healed with great difficulty, yet when they had contracted a gonorrhœa or chancre, the disease has been mild, and easily cured.

In particular people it is either mild or severe for the most part, uni-

formly. In the first stated dispositions it is not invariably so, but then I believe there is some indisposition at the time. I have known several gentlemen who had their gonorrhœas so slight in common, that they frequently cured themselves; but it has so happened, that a gonorrhœa has been remarkably severe, which baffling all their skill they have applied for assistance, but then they were soon attacked with the symptoms of a fever, and when the fever has gone off the symptoms of the gonorrhœa immediately became mild. I may also observe, that when the disease is in the form of a *lues venerea*, different constitutions are differently affected; in some its progress is very rapid, in others it is very slow.

CHAPTER IV.

OF THE LUES VENEREA BEING THE CAUSE OF OTHER DISEASES.

Every animal may be said to have natural tendencies to diseased actions, which may be considered as predisposing causes, and these may be called into action whenever the immediate cause takes place, which may be such as to have no connection with these tendencies, and cannot therefore be considered as the cause of the disease. One disease shall excite another, and therefore is supposed to be the sole cause of it, as slight fevers, or colds, small-pox, and measles, become frequently the immediate cause of scrofula, and certain derangements of the natural actions of the body often bring on the gout, agues, and other diseases; but these diseases will be always more or less, according to the constitution and parts; and the constitutions will differ according to circumstances, which may be numerous; two of these however will be local, situation, and age.

In this country the tendency to scrofula arises from the climate, which is in many a predisposing cause, and only requires some derangement to become an immediate cause and produce the whole disease.

The venereal disease also becomes often the immediate cause of other disorders, by calling forth latent tendencies to action. This does not happen from its being venereal, but from its having destroyed the natural actions, so that the moment the venereal action and disposition is terminated, the other takes place; and I have seen in many cases the tendency so very strong, that it has taken place before the venereal has been intirely subdued; for by pursuing the mercurial course the symptoms have grown worse; but by taking up the new disposition, and rendering it less active than the venereal, the venereal has come into action anew; and these effects have taken place alternately several

times. In such cases it is a lucky circumstance when the two modes of treatment can be united; but where they act in opposition it is very unfortunate. If the venereal disease attacks the lungs, although that disposition may be corrected, consumption may ensue; and in like manner where the bones are affected, or the nose, scrofulous swellings or fistula lacrymalis may be the consequence, though the disease may have been cured.

Many of the diseases arising from this cause appear to be peculiar to such causes, and seem to be formed out of the constitution, the disease, and method of cure; therefore it is difficult to say of what nature such a disease may be; but it will in general have a particular tendency from the constitution; and if we are acquainted with the general tendency of a constitution, we are to suspect that as the strongest cause, and that the disease will partake more of it than of the other. In this country these complaints have most commonly a scrofulous tendency, and are often truly scrofulous, the disease partaking more of that tendency than any other.

Parts have also their peculiar tendencies to diseases, which are stronger than those of the constitution at large, and when injured they will of course fall into the diseased action arising from such tendencies; therefore, when parts have had their natural actions destroyed by a venereal irritation, those tendencies will be brought into action; and therefore the diseases arising from the tendencies of such parts are to be kept in view. They will be assisted likewise by local situation and age.

In particular countries, and in young people, the tendency to scrofula will be predominant; therefore buboes in them will more readily become scrofulous. In old people they may form cancers; and when in parts, the body of which have a greater tendency to cancer, that disease will more readily take place.

The want of knowledge and attention to this subject has been the cause of many mistakes, for whenever such effects have been produced in consequence of the venereal disease it has immediately been blamed, and not only as a cause, but it has been supposed to be the disease

itself. This inference has been drawn from not seeing that a variety of causes are capable of producing one effect, or in other words, that where the predisposing cause is the same, a variety of immediate causes may produce the same action. It must be obvious that the venereal disease cannot be both the predisposing and immediate cause.

When the venereal disease attacks the urethra, it often becomes the predisposing cause of abscesses, and many other complaints; when it attacks the outside of the penis, forming chancres, they often ulcerate so deep as to communicate with the urethra, producing fistulæ in the urethra, and often continued phymoses.

In describing diseases which like the venereal disease admit of a great variety of symptoms, we should keep a middle line, first giving the most common symptoms of the disease in each form, then the varieties which most commonly occur, and last of all the most uncommon; but it will be impossible to take notice of every possible variety, therefore when a variety occurs not mentioned, it is not to be supposed that the author is leading his readers astray, or is unacquainted with the disease at large; for if his general principles are just, they will help to explain most of the singularities of the disease.

PART II.

CHAPTER I.

OF GONORRHOEA.

When an irritating matter of any kind is applied to a secreting surface, it increases that secretion, and changes it from its natural state (whatever that be) to some other, which in the present disease is pus.

When this takes place in the urethra it is called a gonorrhœa; and as it arises from the matter being applied to a non-cuticular surface, which naturally secretes some fluid, it is of no consequence in what part of the body this surface is; for if in the anus, it will produce a similar discharge there, and a similar effect on the inside of the mouth, nose, eyes, and ears. A gentleman, who was using an injection for the cure of gonorrhœa, on finding himself costive made use of the same syringe to throw up some warm water into the rectum. Soon after, he had a violent discharge from the anus, with pain and tenesmus, evidently the symptoms of gonorrhœa in that part. It is conceived by some, that gonorrhœas may take place without the above-mentioned immediate cause; that is, that they may arise from the constitution; if so, they must be similar to what is supposed to be a venereal ophthalmia. But from the analogy of other venereal affections proceeding from the constitution, I very much suspect the existence of either the one or the other: for when the poison is thrown upon the mouth, throat, or nose, it produces ulcers, and not an increased secretion, like a gonorrhœa. But we never find an ulcer on the inside of the eye-lids in those ophthalmias; and gonorrhœas in the urethra are too frequent to proceed from such a cause.

Till about the year 1753 it was generally supposed, that the matter from the urethra in a gonorrhœa arose from an ulcer or ulcers in that passage; but from observation it was then proved that this was not the case.

It may not be improper to give here a short history of the discovery of matter being formed by inflammation without ulceration. In the winter 1749, a child was brought into the room used for dissection, in Covent Garden, on opening of whose thorax a large quantity of pus was found loose in the cavity, with the surface of the lungs and the pleura furred over with a more solid substance similar to coagulable lymph. On removing this from those surfaces they were found intire. This appearance being new to Dr. Hunter, he sent to Mr. Samuel Sharp, desiring his attendance, and to him it also appeared new. Mr. Sharp afterwards in the year 1750, published his Critical Enquiry, in which he introduced this fact, "That matter may be formed without a breach of substance;" not mentioning whence he had derived this notion. It was ever after taught by Dr. Hunter in his lectures; we however find writers adopting it without quoting either Mr. Sharp or Dr. Hunter. So much being known, I was anxious to examine whether the matter in a gonorrhœa was formed in the same way. In the spring of 1753 there was an execution of eight men, two of whom I knew had at that time very severe gonorrhœas. Their bodies being procured for this particular purpose, we were very accurate in our examination, but found no ulceration, the two urethras appeared merely a little blood-shot, especially near the glands. This being another new fact ascertained, it did not escape Mr. Gataker, who was then attending Dr. Hunter's lectures, and also practising dissection under me. He published, soon after in 1754, a treatise on this disease, and explained fully that the matter in a gonorrhœa did not arise from an ulcer, without mentioning how he acquired this knowledge; and it has ever since been adopted in publications on this subject. Since the period mentioned above, I have paid particular attention to this circumstance, and have opened the urethra of many, who at the time of their death had a gonorrhœa, yet have never found a sore in any: but always observed that

the urethra near the glans was more blood-shoot than usual, and that the lacunæ were often filled with matter. I have indeed seen an instance of a sore a little within the urethra; but this sore was not produced by any ulceration of the surface, but from an inflammation taking place probably in one of the glans, which produced an abscess in the part, and that abscess opened its way into the urethra. The very same sore opened a way through externally at the frænum, so that there was a new passage for the urine. Indeed the method of curing a gonorrhæa might have shown that it could not depend upon a venereal ulcer; for there is hardly an instance of a venereal ulcer being cured but by mercury, except by escharotics. We know however that most gonorrhœas are curable without mercury; and what is still more, without any medical assistance, which I believe is never the case with a chancre. This fact of there being no ulcers was first taught publicly by Dr. Hunter at his lectures in the year 1750, but he did not attempt to account for it.

I. OF THE TIME BETWEEN THE APPLICATION AND EFFECT.

In most diseases there is a certain time between the application of the cause, and the appearance of the effect. In the venereal disease this time is found to vary considerably, owing probably to the state of the constitution when the infection was received. Each form of the disease also varies in this respect; the gonorrhœa and chancre being earlier in their appearance after contamination than the *lues venerea*, and of the two former the gonorrhœa appearing sooner than the chancre. In the gonorrhœa the times of appearance are very different; I have had reason to believe that in some the poison has taken effect in a few hours, while in others it has been six weeks; and I have had examples of it in all the intermediate periods; so far however as we can rely upon the veracity of our patients, and farther evidence we cannot have, six, eight, ten, or twelve days would appear to be the most common period, though it is capable of affecting some people much sooner, and others much later. I was informed by a married gentleman who came

from the country and left his wife behind him, that in a frolick he went to a bagnio and had connection with a woman of the town; the next morning he left her, and he had no sooner got to his lodging than he felt a moisture of the part, and upon inspection he found a beginning gonorrhœa, which proved a very troublesome one. I was told by another gentleman, that he had been with a woman over night, and in the morning the gonorrhœa appeared; the same happened to him twice. I was informed by a third gentleman, that the discharge appeared in six-and-thirty hours after the application of the poison. In the above-mentioned patients, the infection must have arisen from the poison applied at those stated times, as none of them had an opportunity of receiving the infection for many weeks before. A gentleman had a chancre, which was cured by the internal use of mercury: when the chancre was nearly well a gonorrhœa made its appearance; this was nearly five weeks after the chancre.

These assertions from men of veracity, and where there could be no temptation to deceive, not even an imaginary one, are sufficient evidences. On the other hand, upon equally good authority, I have been informed that six weeks after the application had passed, before any symptom appeared. The patient had strange and uncommon complaints preceding the running, such as an unusual sensation in the parts, with most of the other symptoms of gonorrhœa except the discharge. He had the same complaint about twelve months afterwards, and then it was four weeks from the application of the poison before it appeared, giving for some part of that time the former disagreeable sensations; but from his late experience he suspected what was coming. From this I am inclined to believe that it seldom or never lies perfectly quiet so long, and that the inflammatory state may take place for some considerable time before the suppurative; and in these cases there is less disposition for a cure, as the very disposition which forms a running is in general a salutary one, and is an intermediate step between the disease, which is the inflammation, and the cure; for in the time of suppuration a change has taken place in the vessels producing the formation of matter. If this change should never take place it is not certain

what would be the consequence; whether the inflammation would go off without suppuration, as in many common inflammations, I have not been able to determine, but should suspect that it would continue much longer than usual, because the parts have not completed their actions; and I also suspect that such cases always arise from some peculiarity of constitution.

II. OF THE DIFFICULTY OF DISTINGUISHING THE VIRULENT FROM THE SIMPLE GONORRHOEA.

The surface of the urethra is subject to inflammation and suppuration from various other causes besides the venereal poison; and sometimes discharges happen spontaneously, when no immediate cause can be assigned; such may be called simple gonorrhœas, and have nothing of the venereal infection in them; though those that have been formerly subject to virulent gonorrhœas are most liable to them. It is given as a distinguishing mark between the simple and the virulent gonorrhœa, that the simple comes on immediately after copulation, and is at once violent; whereas the virulent comes on some days after, and gradually. But the simple is not in all cases a consequence of a man's having had connection with women, it does not always come on at once, nor is it always free from pain. General indisposition shall produce it, and it shall go off with the indisposition. On the other hand we see many venereal gonorrhœas that begin without any appearance of inflammation; and I have been very much at a loss to determine whether they were venereal or not; for there are a certain class of symptoms common to almost all diseases of the urethra, from which it is difficult to distinguish the few that arise solely from the specific affection. I have known the urethra sympathise with the cutting of a tooth* producing all the symptoms of a gonorrhœa, and this happened several times in the same patient. The urethra is known to be sometimes the seat of the gout,† I have known it the seat of the rheumatism. The urethra

* Nat. Hist of Teeth, Pt. II. p. 126.

† Essays and Obs. Phys. and Liter. of Edin. Vol. III. p. 425.

in those who have had venereal complaints is more apt to exhibit symptoms similar to gonorrhœa, than in those who have never had any such complaint; and it is generally in consequence of the part having been hurt by that disease that the simple gonorrhœa comes on; which perhaps is also a reason why they are in some measure similar. In this complaint a discharge and even pain attacks the urethra, and strange sensations are every now and then felt in these parts, which is either a return of the symptoms of the venereal disease without virus, may arise as it were spontaneously, or may be a consequence of some other disease. When it is in consequence of some former venereal gonorrhœa it is seldom constant, and may be called a temporary gleet, ceasing for a time and then returning; but in such cases the parts seldom swell; the glans does not change to the ripe cherry colour, nor does it sweat a kind of matter. Such a complaint, as a discharge without virus, is known to exist by its coming on when there has been no late connection with women, and likewise by its coming on of its own accord where there had never been any former venereal complaint, nor any chance of infection. From its commonly going off soon, both in those who have had connection with women, and in those who have not, it becomes very difficult in many cases to determine whether it is venereal, for it is often thought venereal when it really is not so; and on the other hand it may be supposed to be only a return of the gleet, when it is truly venereal; but perhaps this is not so material a circumstance as might at first be supposed. These diseases may be considered only as an inconvenience intailed on those who have had the venereal gonorrhœa; no certain cure for them is known; they are similar to the fluor albus in women.

The Editor has known a simple gonorrhœa to be brought on by the internal use of arsenic, and to continue for some time after that medicine had been left off, and then disappear; he has also known it to be a consequence of the internal use of ginger.

III. OF THE COMMON FINAL INTENTION OF SUPPURATION NOT ANSWERING IN THE PRESENT DISEASE.

When a secreting surface has once received the inflammatory action, its secretions are increased, and visibly altered; also when the irritation has produced inflammation and an ulcer in the solid parts, a secretion of matter takes place, the intention of which in both seems to be to wash away the irritating matter; so that irritations are endeavouring to produce their own destruction, like a mote in the eye which by increasing the secretion of tears is itself washed away. But in inflammations arising from the specific or morbid poisons this effect cannot be produced; for although the first irritating matter be washed away, yet the new matter formed has the same quality with the original; and therefore upon the same principle, it would produce a perpetual succession of irritations, and of course secretions, even if there were no other cause for the continuance than its own matter. But the venereal inflammation is not kept up by the pus which is formed; but like many other specific diseases, by the specific quality of the inflammation itself. This inflammation however it would appear can only last a limited time; the symptoms peculiar to it vanishing of themselves by the parts becoming less and less susceptible of irritation. This circumstance is not peculiar to this particular form of the venereal disease; it is perhaps common to almost every disease that can affect the human body. From hence it will appear, that the consequent venereal matter has no power of continuing the original irritation, and indeed if this were not the case there would be no end to the disease.

As the living principle in many diseases is not capable of continuing the same action, it also loses this power in the present, when the disease is in the form of a gonorrhœa, and the effect is at last stopped, the irritation ceasing gradually. This cessation will vary according to circumstances; for if the irritated parts are in a state very susceptible of such irritations, in all probability their actions will be more violent and

continue longer; but in all cases the difference must arise from the difference in the constitution, and not from any difference in the poison itself.

The circumstance of the disease ceasing spontaneously, only happens, when it attacks a secreting surface, and when a secretion of pus is produced; for when it attacks a non-secreting surface, and produces its effects there, that is an ulcer, the parts so affected are capable of continuing the disease, or this mode of action, for ever, as will be taken notice of when we shall hereafter consider chancre. But this difference between spontaneous and non-spontaneous cure, seems to depend more on the difference in the two modes of action, than on the difference in the two surfaces; for when the disease produces an ulcer on a secreting surface, which it often does from the constitution, as on the tonsils, it has no disposition to cure of itself; nor in the urethra, in a recent case, if ulcers are formed there, would they heal more readily than when formed any where else.

The common practice proves these facts; we every day see gonorrhœas cured by the most ignorant; but in chancre, or the *lues venerea*, more skill is necessary: the reason is obvious; gonorrhœa cures itself, whilst the other forms of the disease require the assistance of art.

It sometimes happens that the parts which become irritated first, get well, while another part of the same surface receives the irritation, which continues the disease, as happens when it shifts from the glans to the urethra.

From this circumstance of all gonorrhœas ceasing without medical help, I should doubt very much the possibility of a person getting a fresh gonorrhœa while he has that disease; or of his increasing the same by the application of fresh matter of its own kind; and this observation holds in all the forms of the disease; for it has been proved that the application of the matter from a gonorrhœa to a buboe does not in the least retard the cure of that buboe; nor does the matter of a chancre applied to a buboe, nor the matter of a buboe applied to a chancre, produce any bad effect; though if venereal matter is applied to a common sore it will often produce the venereal irritation. By all which I am

led to believe that the venereal matter formed in a gonorrhœa does not assist in keeping up that gonorrhœa; for it is only an application of matter whose poison and effects are exactly similar to the effects upon the solids already produced; and that nothing could increase or continue the effect but something that is capable of increasing this disposition of the parts themselves for such inflammation, or making them more susceptible of it. We find, besides, that a gonorrhœa may be cured while there is a chancre, and vice versa: now if fresh venereal matter was capable of keeping up the disease, no gonorrhœa could ever get well, while there is this supply of venereal matter.* From all this it is reasonable to suppose that such a surface of an animal body is not capable of being irritated by its own matter; nor is it capable of being irritated beyond a certain time; and therefore if fresh venereal matter were continued to be applied to the urethra of a man who had a gonorrhœa, that it would go off just as soon as if no such aplication had been made, and get as soon well as if great pains had been taken to wash its own matter away. The same reasoning holds good in chancres.

I carry this idea still further, and assert that the parts become less susceptible of the venereal irritation; and that not only a gonorrhœa could not be continued by the application of either its own or fresh matter; but that a man could not get a fresh gonorrhœa nor a chancre if he applied fresh venereal matter to the parts when the cure is nearly completed, and continued the application ever after, or at least at such intervals as were within the effect of habit. For I can conceive that in time the parts may become so habituated to this application as to be

* When treating of pus, in my lectures, I observed that I was inclined to believe that no matter, of whatever kind, can produce any effect upon the part that formed it: nor do I believe that the matter of any sore, let it be what it will, ever does or can do any hurt to that sore; for the parts which formed the matter are of the same nature, and cannot be irritated by that which they produced, except extraneous matter is joined with it. The gland which forms the poison of the viper, and the duct which conveys it to the tooth, are not irritated by the poison: and it would appear from Abbé Fontana's experiments, that the viper cannot be affected by its own poison. Vide Traité sur le Vénin de la Vipere, par M. F. Fontana, Vol. I. page 22. If what I have now advanced is true, wiping, or washing away matter under the idea of keeping the parts clean, is in every case absurd.

insensible of it; for by a pretty constant application the parts would never become unaccustomed to it; and therefore this supply of fresh matter could not affect the parts so as to renew the disease, till they first recovered their original and natural state, and then they would be capable of being affected again.

This opinion is not derived from theory only, but is deduced from experience and observation; for we find that a man shall immediately after having a gonorrhœa have frequent connections with women of the town, and that for years, without catching the disease; yet a fresh man shall contract it immediately from the very same women; and if the first mentioned man was to be out of the habit of this irritation for some time, he then would be as ready to catch it as the other. Where this habit is not so strong as to prevent altogether the parts from being affected, yet it will do it in part; and it is a strong proof of this, that most people have their first gonorrhœa the worst, and the succeeding ones generally become milder and milder till the danger of infection almost vanishes.

The following facts seem to explain this: A married man who had connection only with his wife for several years, afterwards slept with a woman with whom he had formerly cohabited, but not for some time; she gave him a severe gonorrhœa, and declared that she knew nothing of it. He put himself and her under my care; and while they were going on with their cure they still continued to have connection with each other, which I readily allowed. He got well, and it was supposed she got well also; the intercourse was continued between them for many months after, without any mischief received on his side, or any suspicion of remaining disease on hers.

At last this connection was broken off, and she formed another attachment: she no sooner formed this new attachment then she gave her new lover a gonorrhœa; she now flew to me for a cure, and declared that she had no connection but with these two gentlemen; and therefore that the present disease must be the same for which I had attended her formerly. Her second lover was not a patient of mine; but I gave her medicines which she very much neglected taking. Her lover con-

tinued his connection, as the first had done, for several months after he had got well, without any further infection from her; but unfortunately her first lover returned about a twelvemonth after, and thinking himself secure, as she lived in peace with the present, had connection with her again, and but once; the consequence however was, a gonorrhœa.

Had the woman the gonorrhœa all this time? And what was the reason of these gentlemen not catching the disease, except after the acquaintance had been interrupted for some time; was it the effect of habit by which the parts lost their susceptibility of that irritation?

The case of a young woman from the Magdalen hospital is a striking proof of this, as far as circumstances can prove a fact. She was received into that house, and continued the usual time, which is two years. The moment she came out she was picked up by one, who was in waiting for her with a post chaise to carry her off immediately; she gave him a gonorrhœa.

This opinion of parts being so habituated to this irritation as hardly to be affected by it, is strengthened by observing, that in the gonorrhœa the violent symptoms shall often cease, and the disease shall still continue, spinning itself out to an amazing length, with no other symptoms than a discharge, yet that discharge shall be venereal; this I have frequently seen: and the following is an abstract of a singular case of this kind.

A gentleman had connection with a woman of the town, and received a venereal gonorrhœa in the beginning of April 1780. He, at first, could hardly believe it to be venereal, as he had kept the woman in the country, where she had scarcely ever been out of his sight; but the violent pain in making water, great running, chordee, and swelled testicle, convinced him that it was venereal. When the cure was going on tolerably well, and he had got the better of one swelled testicle, the other began to swell; however, all the symptoms gradually disappeared, except the chordee, hardness of the epididymis, and a small gleet which was slimy. On the 12th of June he went into the country; while in the country the chordee went off, and the hardness of the epididymis entirely disappeared, but still a slimy gleet remained, although but trifling.

September the first, he married a young lady, and endeavouring to enter the vagina, he found great difficulty, which brought on a return of the chordee, and an increased discharge. On the 10th, she began to complain of heat, and pain, and of a difficulty and frequency in making water, and when she made water there was forced out some matter; she had also a dull heavy pain, and a sense of weight at the bottom of her belly, and round her hips, with great soreness of the parts, when she sat; these symptoms had been preceded by an itching about the orifice of the vagina.

By taking a mercurial pill, and rubbing the parts with mercurial ointment, in about eight days the violence of the symptoms abated; they were now allowed to cohabit, but whenever they came together, the pain which she suffered was excessive. The parts were washed with a solution of corrosive sublimate and sugar of lead, and anointed with mercurial ointment, which applications being continued for some time, the soreness went off. He was treated medically, and afterwards all was well.

Here was a venereal gonorrhœa contracted about the beginning of April; all the symptoms had disappeared by the first of June, and there only remained some of the consequences, such as chordee, hardness of the epididymis, and a discharge of a little slimy mucus, which could only be observed in the morning. In a short time the chordee and hardness in the epididymis had entirely gone off, and merely the small discharge of mucus, which appeared only in the morning, remained; yet three months after he communicated the disease to his wife.

I was consulted in the following case by the surgeon, who attended: July 13th, 1783, a person had connection with a woman of the town: the 30th, that is seventeen days after, a gonorrhœa came on, which was violent. He took mercurial pills and gentle purges; in twelve days the violent symptoms abated, and about the 4th of September the discharge was stopped. On the 8th it began to appear again, but only lasted a few days; and it would come and go in this way sometimes every two days; often in six or seven days. On the 28th of September he had connection with his wife, while he had a small discharge. The 9th of

October he had connection again, and three days after she complained of heat in making water, with a discharge and other symptoms of gonorrhœa, which were violent. About the latter end of October her complaints were almost removed; some only of the symptoms appearing and disappearing till January 1784, when he had connection with her to try whether she could give it him, viz. three months after the second connection, and in fourteen days after this he had all the symptoms of a gonorrhœa. April 29th he was not perfectly well, having a discharge with a pain in the perinæum, and she also had a discharge. If this last attack in January 1784, in him, was a gonorrhœa, then of course she must have had it; and also of course he must have lost his in the intermediate time, between the 9th of October 1783, and January 1784; for if he had had it also then, it could not have produced any effect upon him.

It was impossible to say whether they had now the infection or not, for any trials upon themselves would prove but little, except one of them only had it so as to infect the other; but if both had it, no alteration could take place in either; as it could not be ascertained whether they had the disease or not; and as there were suspicious symptoms in both, when joined with all the circumstances, the attending surgeon and I thought it most prudent to treat them as if actually affected with a gonorrhœa.

If it is true, as is asserted in the voyage round the world, that the venereal disease was carried to Otaheite, it shews that it can be long retained after all ideas of its existence have ceased; and when it is retained for such a length of time, it is most probably in the form of gonorrhœa.*

In like manner, a venereal buboe, if it could be kept a considerable time between the point of suppuration and resolution, would become indolent from habit, continue in that point of suspension, and remain perhaps almost incurable; such I think I have seen.

* Vide page 14.

IV. OF THE VENEREAL GONORRHOEA.

In treating of the seat, extent, and symptoms of gonorrhœa, I shall begin with such particulars as are constant or most frequent, and take them as much as possible in the order, in which they become less so; for there is considerable variety in different patients.

V. OF THE SEAT OF THE DISEASE IN BOTH SEXES.

The seat of this disease in both sexes is commonly the parts of generation. In men it is generally the urethra, though it sometimes takes place on the inside of the prepuce and surface of the glans: in women it is the vagina, urethra, labia, clitoris, or nymphæ.

The disease has its seat in these parts from the manner in which it is caught; but if we were to consider the surface of contact simply in men, we should naturally suppose that the glans penis, inner surface of the prepuce near to the glans or the orifice of the urethra would be the first, or indeed the only parts affected; yet most commonly they are not; for though there are cases in which these surfaces are affected, and where the disease goes no further, I believe it seldom attacks the orifice of the urethra, without passing some way along that canal. How far it ever can be said to affect the prepuce only, I am not quite certain, although I believe it sometimes happens; for I have seen inflammation there, as well with, as without a discharge from the urethra, which appeared to me to be venereal. I have seen in such cases the inflammation extending into the loose cellular membrane of the prepuce and producing a phymosis; and this inflammation I suspect to be of the erysipelatous kind.

When the disease attacks the glans, and other external parts, as the prepuce, I believe it is principally in those patients, whose glans is commonly covered with the prepuce, and it is principally about the root of that body, and the beginning of the prepuce, the parts where the

cuticle is thinnest, and of course where the poison gets most readily to the cutis; but sometimes it extends over all the glans and also the whole external surface of the prepuce. It produces there a soreness or tenderness, with a secretion of thin matter, commonly without either excoriation or ulceration. I am not certain however, that it does not sometimes excoriate those parts, for I once saw a case where almost the whole cuticle came off the glans, and the patient assured me that it was venereal, for he had been picked up by a woman in the streets a few nights before; he never had had any such complaint from connection with women before that time. Perhaps the disease begins oftener on those parts than is commonly imagined, but the circumstance of their being little susceptible of this kind of irritation, from their having a cuticle, may be the reason why it does not produce a lasting effect, and is often so slight as not to be observed. When the glans or prepuce, or both, take on the venereal inflammation, it often rests there and goes no further, not being attended with a discharge of matter, nor with pain in the urethra, as the following case shews.

A young gentleman from Ireland, slept with a woman at Bristol, and a fortnight after he had intercourse in London with the maid of the house, which last happened to be on a Monday, and on the Tuesday, or the day following, he observed a running from the end of his penis when covered with the prepuce; on the Saturday following he applied to me; on examination I found that the running came from the inside of the prepuce near to the glans, and the *corona glandis*, as also that part of the prepuce behind it, appeared to be in a tender and excoriated state, and covered with matter. He told me he had once had a gonorrhœa before; and upon being asked if it was in the same place, he said it was; not being certain how far this might be venereal, I made the following inquiry; whether he had been subject to such excoriations before he had visited women? And his answer was, that he never had; and that he had not this complaint always after coition, but only twice, as has been above-mentioned, which being uncommon, made him suppose the effect to be venereal.

I suspect that when the prepuce swells in a gonorrhœa of the urethra,

producing a phymosis, which is often the case, it arises from the same disease having taken place on its inside, and that not being sufficient to produce ulceration, it goes no further; and that this inflammation is of the erysipelatous kind; a circumstance very necessary to be known in the cure.

The urethra is the part in which this form of the venereal disease is most frequent; and although the inflammation attending the disease in this part has many of the common symptoms of inflammation, yet it can hardly be called such, when moderate; at least it does not constantly produce all the effects of common inflammation, though there is a tendency towards it. The parts seldom have all the characteristic symptoms; for there is no throbbing sensation; there is but little pain, except from the irritation of the urine and distention of the parts; the inflammation seldom extends deeper than the surface, and we have therefore rarely any tumefaction or thickening of the parts. It would rather appear an *error loci* on the surface of the urethra like a blood-shot eye.

The secretion of pus with so little inflammation, is perhaps owing to these parts being naturally in a state of secretion; therefore the transition from an healthy to a diseased secretion is more easily produced. It sometimes happens however, that the parts do inflame considerably, and the inflammation goes deep into the cellular or rather reticular membrane of the *corpus spongiosum urethræ*, especially near the glans. Sometimes it extends further along the *corpus spongiosum urethræ*, producing tumefaction, that is, an extravasation of coagulable lymph, which is the common cause of chordee. It may be observed in general, that in most cases, when suppuration is produced, there is a decrease of inflammation. The inflammation in the reticular membrane of the surrounding parts would appear not to be always confined to the adhesive stage, for in those parts we have sometimes suppurations, especially in the perinæum, which suppurations I suspect to be in the glans, as will be taken notice of hereafter.

The gonorrhœa does not always attack urethras otherwise sound, nor does it always attack urethras whose relative parts are always sound.

Thus we have people contracting this disease, while they are affected with strictures, swelled prostate gland, as also diseased testicles, or such testicles as very readily run into disease; by which the disease becomes more complicated, and requires more attention in the method of cure. Sometimes the diseases are relieved by the gonorrhœa, at other times increased.

VI. OF THE MOST COMMON SYMPTOMS, AND THE ORDER OF THEIR APPEARANCE.

Although the irritation must always begin first, yet it is not certain which of the symptoms in consequence of that irritation will first appear; for any one may appear singly without the others, though this is rarely the case. The first symptom, when carefully attended to, is generally an itching at the orifice of the urethra; sometimes extending over the whole glans, a little fulness of the lips of the urethra; the effects of inflammation are next observable, and soon after a running appears; the itching changes into pain, more particularly at the time of making water; there is often no pain till some time after the appearance of the discharge, and other symptoms; and in many gonorrhœas there is hardly any pain at all, even when the discharge is very considerable; at other times the pain, or rather a great degree of soreness, comes on long before any discharge appears, and extends a little way down the canal. I have known these sensations to be felt half way down the urethra.

There is generally at this time a greater fulness in the penis, and more especially in the glans, although it is not near so full as when erected, being rather in a state of half erection. Besides this fulness, the glans has a kind of transparency, especially near the beginning of the urethra, where the skin is distended, being smooth and red, resembling a ripe cherry; this is owing to the reticular membrane being loaded with a quantity of extravasated serum, and the vessels being filled with blood. Near the beginning of the urethra there is in many cases an evident excoriation, which is marked by the termination of the cuticle

all around; the surface of the glans also is often in an half excoriated state, which gives it a degree of tenderness, and there ouses out from it a kind of matter, as has been before observed: but this is more evident in those whose glans penis is commonly covered by the prepuce, for when denuded the cuticle becomes thicker, and is less readily irritated. The canal of the urethra becomes narrower than usual, which is known by the stream of the urine being smaller than common; this proceeds from the fulness of the penis in general, and from the internal membrane of the urethra being swollen by the inflammation, and also from its being in a spasmodic state.

Besides these changes, the fear the patient is in when he is making water assists in diminishing the stream of urine. The stream, as it flows from the urethra, is generally much scattered and broken the moment it leaves the passage, which is owing to the internal canal having become irregular, and is not peculiar to a venereal gonorrhœa, but common to every disease of the urethra that alters the exact and natural figure of the canal, even although the irregularity is very far back, as we find in many diseased prostate glands.* In some instances the first symptoms are unusual sensations in the penis, especially while making water, which come on a few days after receiving the infection, attended with constitutional irritability, sensations in the testicles, neck of the bladder, and anus; these continue for about ten days, when a discharge comes on, and they disappear.

There is frequently a bleeding from the urethra, which I suppose arises from the distension of the vessels, more especially when there is a chordee, or a tendency to one.

There are often small swellings observable along the lower surface of the penis in the course of the urethra. These I suspect are the glands of the urethra so enlarged as to be plainly felt on the outside. They inflame so much in some cases as to suppurate; and according to the laws of ulceration, the matter is brought to the skin, forming one, two,

* These symptoms are most carefully observed by those who are under apprehensions of having the disease, and therefore are attentive to every little sensation about those parts.

or more abscesses along the under surface of the urethra, and some of these breaking internally form what are called internal ulcers. I have observed in several cases a tumor on the under side of the penis where the urethra is, which would swell at times very considerably, even to the size of a small flattened nut, inflame, and then a gush of matter flowing from the urethra, it would almost immediately subside. The discharge has continued for some time, gradually diminishing till it has intirely gone off and the tumor has been almost wholly reduced; yet some months after it has swelled in the same manner again, and terminated in the same way. How far these tumors, and the matter they discharge, are really venereal when they appear first, may be doubtful; and it is difficult to determine this, from the patients in general having recourse to medicine immediately; but in their subsequent attacks they are certainly not venereal, for they cure themselves.

I have suspected these tumors to be the ducts, or lacunæ of the glands of the urethra distended with their mucus from the mouth of the duct being closed, in a manner similar to what happens to the duct leading from the lachrymal sac to the nose; and in consequence of the distention of the ducts or lacunæ, inflammation and suppuration come on, and ulceration takes place, which opens a way into the urethra; but this opening soon closes up and this occasions a return. Cowper's glands have been suspected to inflame, and hardness and swelling have been felt externally very much in their situation, which coming to suppuration have produced considerable abscesses in the perinæum. These tumors break either internally or externally, and sometimes in both ways, making a new passage for the urine, called *fistulæ in perinæo*

A soreness is often felt by the patient all along the under side of the penis, owing to the inflamed state of the urethra. This soreness often extends as far as the anus, and gives great pain, principally in erections; yet it is different from a chordee, the penis remaining straight.

With most gonorrhœas there is a frequency in the erections, arising from the irritation at the time, which often approach to a priapism, especially when there is the above-mentioned soreness, or when there

is a chordee. These erections take place independant of the mind: they have been called involuntary; but all erections are involuntary: no man can will an erection.

Priapisms often threaten mortification in men; and I have seen an instance of it in a dog. The erection never subsided, and the penis could not be covered by the prepuce, from the swelling of the bulb. The penis mortified and dropped off; and as a dog has a bone in the penis, this was denuded, and an exfoliation took place. As opium is of great service in priapism, there is reason to suppose the complaint is of a spasmodic nature.

VII. OF THE DISCHARGE.

The natural slimy discharge from the glands of the urethra is first changed from a fine transparent ropy secretion to a watery, whitish fluid; and the natural exhaling fluid of the urethra, which is intended for moistening that surface, and which appears to be of the same kind with that which lubricates cavities in general, becomes less transparent; and both these secretions becoming gradually thicker, assume more and more the qualities of common pus. In some cases of gonorrhœa, the glands, that produce the slime which is secreted in consequence of lascivious ideas, are certainly not affected; for I have seen cases, when after the passages had been cleared of the venereal matter by making water, the pure slime has flowed out of the end of the penis, on these ideas taking place. When this matter is more in quantity than what lubricates the urethra, it is forced out at the orifice by the peristaltic action of that canal, and appears externally.*

The matter of gonorrhœa often changes its colour and consistence, which is owing to the disposition of the parts which form it; sometimes from a white to a yellow, and often to a greenish colour. These changes

* That the urethra has considerable powers of action, is evident in a vast number of instances, and that action is principally from behind forwards. We find that a bougie may be worked out by the action of the urethra. This action, I believe, is often inverted, as in spasmodic stranguries.

depend on the increase or decrease of the inflammation, and not on the poisonous quality of the matter itself; for any irritation on these parts, equal to that produced in a gonorrhœa, will produce the same appearances; and the changes in the colour of the matter are chiefly observable after it has been discharged upon a cloth, and become dry. The appearance upon the cloth is of various hues; in the middle the matter is thicker or more in quantity, and it is therefore generally of a deeper colour; the circumference is paler, because the watery or serous part of the matter has spread further, and at the outer edge of all it is darkest; this last appearance is owing to its being only water with a little slime, in which some of the matter which gives the tinge is suspended, which when dry gives a transparency to the part, that takes off from the white colour of the linen. It is very probable there is a small extravasation of red blood in all the cases where the matter deviates from the common colour, and to this the different tinges seem to be owing. As this matter arises from a specific inflammation, it has a greater tendency to putrefaction than common matter from a healthy sore, and has often a smell seemingly peculiar to itself.

As it would appear that there is hardly a sufficient surface of the urethra inflamed to give the quantity of matter that is often produced, especially when we consider that the inflammation in common goes no further than two or three inches from the external orifice, it is natural to suppose that the discharge is produced from other parts, the office of which is to form mucus for natural purposes, and which are therefore more capable of producing a great quantity upon slight irritations, which hardly rise to inflammation. These parts I have observed, are the glands of the urethra. In many cases where the glands have not been after death so much swelled as to be felt externally; and where I have had an opportunity of examining the urethra of those, who have had this complaint upon them, I have always been able to discover, that the ducts or lacunæ leading from them, were loaded with matter, and were more visible than in their natural state; I have observed too, that the formation of the matter is not confined to these glands intirely, for the inner surface of the urethra is commonly in such a state as not

to be able to suffer the urine to pass without giving considerable pain, and therefore most probably this internal membrane is also affected in such a manner as to secrete a matter.

This discharge in common cases would seem not to rise much further back in the urethra than where the pain is felt, although it is commonly believed that it comes from the whole of the canal, and even from Cowper's and the prostate glands, not excepting what are called the vesiculæ seminales.* But the truth of this I very much doubt. My reasons for supposing that it comes only from the surface where the pain is, are the following. If the matter arose from the whole surface of the urethra, and from the glands near the bladder, we should certainly have many other symptoms which we have not; for instance, if all the parts of the urethra beyond the bulb, or even in the bulb, were affected so as to secrete matter, that matter would be gradually squeezed into the bulb as the semen is, and from thence it would be thrown out by jerks; for we know that nothing can be in the bulbous part of the urethra, without stimulating it to action, especially when in a state of irritation and inflammation; in such a state we find that even a drop of urine is not allowed to rest there; and also if an injection of warm water only is thrown into the urethra as far as the bulb, the *musculi acceleratores* are uneasy till they act, and throw it out. Hence it is natural to suppose that, if the membranous and bulbous part of the urethra, with the vesiculæ seminales, prostate and Cowper's glands, assisted in forming the matter, whenever it collected in the bulb it would probably be immediately thrown forwards by the muscles above mentioned, and we should be sensible of it every moment of the day. But such symptoms seldom occur; sometimes indeed a spasmodic contraction of these muscles takes place, which may probably arise

* Those bags are certainly not reservoirs for the semen. The difference between their contents and the semen gave me the first suspicion of this; and from several experiments on the human body, as also a comparative view of them in other animals, I have been able to prove that they are not. Mr. Hunter's observations on this subject are published in his work on the animal œconomy.

from this cause, though it is more frequently felt immediately after making water.

When the inflammation is violent, it often happens that some of the vessels of the urethra burst, and a discharge of blood ensues, which is in greater quantity at the close of making water; this however takes place at other times, and generally gives temporary ease: sometimes this blood is in small quantity, and only gives the matter a tinge, as I observed when treating of the colour of the discharge. The erections of the penis often stretch the part so much as to become a cause of an extravasation of blood; this extravasation generally increases the soreness at the time of making water, and in such a state of parts the urethra is usually sore when pressed, yet the bleeding diminishes the inflammation, and often gives ease.

VIII. OF THE CHORDEE.

The chordee appears to be *inflammatory* in some cases, and *spasmodic* in others; we shall treat first of the inflammatory.

When the inflammation is not confined merely to the surface of the urethra and its glands, but goes deeper, and affects the reticular membrane, it produces in it an extravasation of coagulable lymph, as in the adhesive inflammation, which uniting the cells together destroys the power of distension of the *corpus spongiosum urethræ*, and makes it unequal in this respect to the *corpora cavernosa penis*, and therefore a curvature on that side takes place in the time of erection, which is called a chordee. Besides this effect of inflammation, when the chordee is violent the inner membrane is, I suppose, so much upon the stretch, as to be in some degree torn, which frequently causes a profuse bleeding from the urethra that often relieves, and even sometimes cures. As chordee arises from a greater degree of inflammation than common; it is an effect which may, and often does, remain after all infection is gone, being merely a consequence of the adhesive inflammation.

The spasmodic chordee arises from spasm, at least it cannot proceed

from the same cause with the other, if my idea of that complaint be well founded. The spasmodic chordee comes and goes, but at no stated times; at one time there will be an erection entirely free from it, at another it will be severely felt, and this will often happen at short intervals.

IX. OF THE MANNER IN WHICH THE INFLAMMATION ATTACKS THE URETHRA.

In what manner the disease extends itself to the urethra, is a question not yet absolutely determined; I suspect that it is communicated, or creeps along from the glans to the urethra, or at least from the beginning or lips of the urethra to its inner surface; because it is impossible to conceive, that any of the venereal matter from the woman can get into the canal in the time of coition, although this is commonly believed and asserted; it is impossible at least that it can get so far as the common seat of the disease, or into those parts of the urethra where it very often exists, that is, through the whole length of the canal. The following case amounts almost to a proof of this opinion.

A gentleman, on whose veracity I have an entire confidence, when in Germany, where he had not lain with a woman for many weeks, was in a necessary-house and sat there some time; upon arising he found something, that seemed to give the glans penis a sharp pull, and he found a small bit of the plaister of the necessary-house sticking to it. He paid no further attention to it at that time than merely to remove what stuck to his penis; but five or six days after, he observed the symptoms of a clap, which proved a pretty severe one. The only way of accounting for this is, that some person who had a clap had been there before him, and had left some venereal matter upon this place, and that the penis had remained in contact with it a sufficient time for the matter to dry.

When the disease attacks the urethra it seldom extends further than an inch and an half, or two inches at most, within the orifice, which

distance appears to be truly specific, and what I have called the specific extent of the inflammation.*

As the cause of a gonorrhœa is commonly an inflammation, it is accompanied with pain and the formation of matter; in such a state neither the sensations of the patient, nor the actions of the parts themselves are confined to the real seat of the disease. In consequence of the neighbouring parts sympathising, a variety of symptoms are produced, many of which do not exceed what might arise from an irritable state; an uneasiness partaking of soreness and pain, and a kind of weariness, is every where felt about the pelvis: the scrotum, testicles, perinæum, anus, and hips, become disagreeably sensible to the patient; and the testicles often require being suspended; and so irritable are they indeed in such cases, that the least accident or even exercise which would have no such effect at another time, will make them swell. The glands of the groin are often affected sympathetically, and will even swell a little, but do not come to suppuration: when they inflame from the absorption of matter they in general suppurate. I have seen cases where the irritation has extended so far as to affect with real pain the thighs, the buttocks, and the abdominal muscles, so that the patient has been obliged to lie quiet in an horizontal position; the pain has at times been so considerable as to make him cry out, and the parts have been very sore to the touch; they have even swelled, but the swelling has not been of the inflammatory kind; for though there was a visible fulness, yet the parts were rather soft. I knew many gentlemen who never had a gonorrhœa, but that were immediately seized universally with rheumatic pains, and this had happened several times. The blood at such times is generally free from the inflammatory appearance, and therefore we may suppose that the constitution it but little affected.

When the gonorrhœa (exclusive of the affections arising from sym-

* It is to be here remarked, that specific diseases, among which I shall reckon such as arise from morbid poisons, have their specific distance or extent as one of their properties; but this can only take place where the constitution is not susceptible or erysipelas, or any other uncommon mode of action; for where there is an erysipelatous disposition, no bounds are set to the inflammation.

pathy) is not more violent than I have described, it may be called *common* or *simple venereal* gonorrhœa; but if the patient is very susceptible of such irritation, or of any other mode of action which may accompany the venereal, then the symptoms are in proportion more violent. In such circumstances we sometimes find the irritation and inflammation exceed the specific distance, and extend through the whole of the urethra. There is often also a considerable degree of pain in the perinæum, and a frequent, though not a constant, symptom is a spasmodic contraction of the acceleratores urinæ, which is always attended with contractions of the erectores muscles. Whether these spasms arise from a secretion of matter, which being collected in the bulbous part of the urethra produces uneasiness, and excites contractions in order to its own expulsion, like the last drops of urine, I have not been able to determine. I have seen such spasms in the time of making water, from the urine irritating the parts in its passage through the urethra, and throwing the *musculi acceleratores* into contractions, so that the water came by jerks. This kind of inflammation sometimes is considerable, goes deep into the cellular membrane, and produces tumefaction, without any other effect. There is often a pain in the urethra after making water in the same part in which it is usually felt while the water passes: this I believe to be the effect of the contraction of the internal membranes, which lasts for some time after the action has ceased. In other cases it goes on to suppuration, often becoming one of the causes of fistulæ in perinæo. I have sometimes, as I have already observed, suspected Cowper's glands to be the seat of such suppurations; for I have observed externally, circumscribed swellings in the situation of those glands. The small glands likewise of the bulbous part of the urethra may be affected in a similar manner; and the irritation is often extended even to the bladder itself. This happens more commonly towards the going off of the gonorrhœa.

When the bladder is affected, it becomes more susceptible of every kind of irritation, so that very disagreeable symptoms are often produced; it will not allow of the usual distension, and therefore the patient cannot retain his water the ordinary time, and the moment the desire

of making water takes place, he is obliged instantly to make it, with violent pain in the bladder, and still more in the glans penis, exactly similar to what happens in a fit of the stone. If the bladder be not allowed to discharge its contents immediately, the pain becomes almost intolerable; and even when the water is evacuated, there remains for some time a considerable pain, both in the bladder and glands; because the very action of the muscular coat of the bladder becomes a cause of pain by its own contraction,

The ureters, and even the kidnies, sometimes sympathise, when the bladder is either very much inflamed, or under a considerable degree of irritation; however, this but rarely happens; and if it should take place with any degree of violence, I should suppose that the stomach would also become affected, and of course the whole constitution. I have even reason to suspect that the irritation may be communicated to the peritonæum by means of the vas deferens; the following case appears to have been an instance of this. A gentleman had a gonorrhœa which was treated in the antiphlogistic way; the discharge in some degree stopped, a tension came upon the lower part of the belly on the right side just above Poupart's ligament, but rather nearer to the ilium; there was hardness and soreness to the touch, this soreness spread over the whole belly, producing rigors every third day, with a low pulse, which to me indicated a peritonæal inflammation, arising, in my opinion, from the vas deferens of that side being affected in its course through the belly and pelvis.

When the inflammation, or perhaps only the irritation, runs along the whole surface of the urethra, attacks the bladder, and even extends to the ureters and the kidnies so as to cause a disagreeable sensation in all these parts, the disease is generally very violent, and I suspect is something of the erisypelatous kind; at least it shows an irritable sympathising habit

This disease sometimes produces very uncommon symptoms: A gentleman had a gonorrhœa, and when the inflammatory symptoms were abating, the urethra lost both the involuntary and voluntary powers of retaining the urine: his water came away involuntarily, nor

could he stop it: I advised him to do nothing, and to wait for some time, as probably the method of cure might be more disagreeable than the disease itself, although it was very troublesome to him when in company. The complaint gradually lessened, and in time went entirely off. If I had recommended any medicine it would have been the tincture of cantharides.

X. OF THE SWELLED TESTICLE.

A very common symptom attending gonorrhœa is a swelling of the testicle. This, I believe, like the affection of the bladder, and many of the symptoms mentioned before, is only sympathetical, and not to be reckoned venereal, because the same symptoms follow every kind of irritation on the urethra, whether produced by strictures, injections, or bougies. It may be observed here, that those symptoms are not similar to the actions arising from the application of the true venereal matter, whether by absorption, or otherwise; for they seldom or ever suppurate, and when suppuration happens, the matter produced is not venereal.

The testicles seem as it were in many cases rather to be acting for the urethra, than for themselves; thus the swelling and inflammation appears suddenly, and as suddenly disappears, or in a few minutes goes from one testicle to the other; the affection depending upon the state of the urethra, and not at all upon the part itself. A part, however, of the testicle, the epididymis, assumes all the characters of inflammation, remaining swelled even for a considerable time after the inflammation has been subdued.

The first appearance of swelling in the testicle is generally a soft pulpy fulness of the body of the testicle, which is tender to the touch; this increases to a hard swelling, accompanied with considerable pain. The hardest part is generally the epididymis, and principally that portion of it which is at the lower end of the testicle, as may be distinctly felt; the hardness and swelling however often run the whole length of

that body, and form a knob at the upper part. The spermatic chord is likewise often affected, and more especially the vas deferens, which is thickened, and sore to the touch. The veins of the testicle sometimes become varicose. I have seen such a state of veins accompany a swelling of the testicle in two instances. A pain in the small of the back generally attends inflammations of the testicle of all kinds, with a sense of weakness of the loins and pelvis. The bowels generally sympathise with most complaints of the testicle, in some by cholicky pains, in others by an uncommon sensation both in the stomach and intestines: sickness is a common symptom, and even vomiting; the powers of digestion by these means are impaired, and a disposition for the accumulation of air takes place which is often very troublesome. Here we have from the testicles a chain of sympathies, as we had in consequence of the irritation running along the whole urinary passages; first the testicle is affected from the urethra, then the spermatic chord, the loins, intestines, stomach, and from thence in some measure the whole body.

In a case of swelled testicle I have known the buttocks swell, but the swelling was not of the inflammatory kind, and in making water pain was felt there. Whether this symptom arose from the swelling of the testicle, or from the same common cause, that is the gonorrhœa, is not easily determined, although the latter supposition is the most probable.

It has been asserted, but without proof, that in cases of swelled testicles in consequence of a gonorrhœa, it is not the testicle that swells, but the epididymis. The truth is, it is both the one and the other. Any man that is accustomed to distinguish between a swelling of the whole testicle, and that of the epididymis only, will immediately be sensible, that in the *hernia humoralis* the whole testicle is swelled; the testicle assumes the same shape, that it does from other causes, where we know, from being obliged to remove it, that the whole has swelled. The pain is in every part of the testicle. I have seen such swellings suppurate on the fore part, and have known several instances of adhesions between the tunica albuginea and vaginalis from such causes; this has only been discovered after death, or in the operation for a partial hydrocele; such

changes could not have taken place if the body of the testicle had not been in a state of inflammation. This inflammation of the testicle most probably arises from its sympathising with the urethra, and in many cases it would appear to arise from what is understood by a translation of the irritation from the urethra to the testicle: thus a swelling of the testicle coming on shall remove the pain in making water, and suspend the discharge; which shall not return till the swelling of the testicle begin to subside; or the irritation in the urethra first ceasing shall produce a swelling of the testicle, which shall continue till the pain and discharge return; thus rendering it doubtful, which is cause and which is effect. I have nevertheless known cases where the testicle has swelled, and yet the discharge has become more violent; nay, I have seen instances where a swelling has come on after the discharge had ceased, yet the discharge has returned with violence, and remained as long as the swelling of the testicle. Sometimes the epididymis only is affected, sometimes the vas deferens, and at other times only the spermatic chord, producing varicose veins; no reason can be assigned why one of these parts is affected more than another, and indeed the immediate cause in all is yet unknown. For although an action in the urethra is the remote cause, yet it is still impossible to say whether it be the cessation of that action that is the cause of the swelling in the testicle, or the swelling in the testicle the cause of the cessation. It is described as arising from an irritation taking place in the mouths of the vasa deferentia: were this the cause, it ought in general to affect both testicles at the same time; but I have seen this complaint happen as often where the inflammation went no further back in the urethra than about an inch and a half, or two inches, as where it has extended further; and the swelling shifting suddenly from one testicle to the other, shews it to arise from some other principle in the animal œconomy.

A strangury often attends such cases of sympathy, and more frequently when the running stops, than when that discharge is continued along with the swelling of the testicle; indeed any sudden stopping of the discharge gives a tendency to a strangury. When the testicle is swelled blood comes away with the semen; this may either be thrown

out in the act of secretion, or come from the blood vessels of the urethra in the act of emission.

As singular a circumstance as any respecting the swelling of the testicle is, that it does not always come on when the inflammation in the urethra is at the height: I think it oftener happens when the irritation in the urethra is going off, and sometimes even after it has entirely ceased, and when the patient conceives himself to be quite well.

I may be allowed to remark, that swellings in the testicle in consequence of venereal irritation in the urethra, subject it to a suspicion that every swelling of this part is venereal: but from what I have said of its nature when it arises from a venereal cause, which was, that it is owing to sympathy only, and from what I shall now say, that it is never affected with the venereal disease either local or constitutional, as far as my observation goes, we must infer that such suspicions are alwsys ill-founded; this perhaps is an inference to which few will subscribe.

I have known the gout produce a swelling in the testicle of the inflammatory kind, and therefore similar to the sympathetic swelling from a venereal cause, having many of its characters. Injuries done to the testicles produce swellings, but they are different from those above-mentioned, being more permanent, having the disease or cause in the part itself. Cancer and scrofula produce swellings of the testicles, but these are generally slow in their progress, and not at all similar to those arising from an irritation in the urethra.

XI. OF THE SWELLINGS OF THE GLANDS FROM SYMPATHY.

Since our knowledge of the manner in which substances get into the circulation, and our having learned that many substances, especially poisons, in their course to the circulation, irritate the absorbent glands to inflammation and tumefaction, we might naturally suppose such swellings, accompanying complaints in the urethra attended with a discharge, to be owing to the absorption of that matter, and therefore if it be a venereal discharge, that they must also be venereal. But we

must not be too hasty in drawing this conclusion; for we know that the glands will sometimes swell from an irritation at the origin of the lymphatics, where no absorption could possibly have taken place. They often swell and become painful upon the commencement of inflammation, before any suppuration has taken place, and subside upon the coming on of suppuration; because when the suppuration begins, the inflammation abates. I have known a prick in the finger with a clean sewing needle, produce a red streak all up the fore-arm, pain along the inside of the biceps muscle, a swelling of the lymphatic gland above the inner condyle of the humerus, and also of the glands of the arm-pit, immediately followed by sickness and a rigor, all of which however soon went off. As it would therefore appear, that the absorbent system is capable of being affected as well by irritation, as by the absorption of matter, in all diseases of this system arising from local injuries attended with the matter, one must always have these two causes in view, and endeavour, if possible, to distinguish from which the present affection proceeds. For in those arising from an irritated surface in consequence of poison, especially the venereal, it is of considerable consequence to be able to say from which of the two it arises; since it sometimes happens, although but seldom, that the glands of the groin are affected in a common gonorrhœa with the appearance of beginning buboes, but which I suspect to be similar to the swelling of the testicle, that is, merely sympathetic; the pain they give is very trifling, when compared with that of true venereal swellings arising from the absorption of matter; and they seldom suppurate; however, there are swellings of these glands from actual absorption of matter in gonorrhœa, and which consequently are truly venereal; and as it is possible to have such, they are always to be suspected. As they have sometimes arisen upon a cessation of the irritation in the urethra, similar to the swelling of the testicle, it has been supposed that the matter was driven as it were into them by unskilful treatment. From our knowledge of the absorbing system, we know that the matter can go that way; but we also know that we have no method of driving it that away; and if we had, there is no reason why more should not be formed in the urethra; this there-

fore does not account for the cessation of secretion of matter in that part.

It is difficult to say, what is the nature of those sympathetic diseases. They are not venereal, for they subside by the common treatment of inflammation without the use of mercury; and I have known an instance of a swelled testicle from a venereal gonorrhœa, that suppurated, and was treated, by my advice, as a common suppuration, and healed without a grain of mercury being given. Neither can they be called truly inflammatory, having rarely any of the true characters of inflammation, such as thickening of the parts, symptomatic fever, or sizy blood, except in swellings of the testicle and glands. The swelling of the testicle has several peculiarities attending it; it is often very quick in its increase, and not being of the true inflammatory disposition, it requires less time for the removal of the inflammation; but even where it appears to have more of the true inflammatory action, we find that the removal of the inflammation and tumefaction take place more rapidly than when proceeding from other causes. A swelled testicle, in consequence of the radical cure in the hydrocele, does not subside after inflammation is gone, in as many weeks, as the swelled testicle in consequence of its sympathy with other parts, does in days; and probably the reason of this is, that it arises from sympathy; for an inflammation arising from real disease in a part, or from an external injury, as in the hydrocele, must always last either till the disease be removed, or the injury repaired: but that from sympathy will vary as the cause varies, which may happen very quickly; for we find a testicle swell in a few minutes, and in as little time subside; and also the swelling move suddenly from one testicle to the other. These sympathies are often peculiar to particular constitutions, and even to temporary constitutions, in so much as to be in some degree epidemic; for there is often such an influence in the atmosphere as predisposes the body to this kind of irritation; and bodies so predisposed require only the immediate cause to produce the effect.

XII. OF THE DISEASES OF THE LYMPHATICS IN A GONORRHOEA.

Another symptom which sometimes takes place in gonorrhœa, is a hard chord leading from the prepuce, along the back of the penis, and often directing its course to one of the groins, and affecting the glands; there is most commonly a swelling in the prepuce at the part where the chord takes its rise. This happens sometimes when there is an excoriation, and discharge from the prepuce or glans, which may be called a venereal gonorrhœa of these parts. Both the swelling in the groin, and the hard chord, we have reason to suppose arise from the absorption of pus, and therefore are the first steps towards a lues venerea; but as that form of the disease seldom happens from a gonorrhœa, I shall not take any further notice of it in this place; however, I may remark, that from this observation of the lues venerea being seldom produced from a gonorrhœa, it would appear that a whole surface, or one only inflamed, does not readily admit of the absorption of the venereal poison; and therefore, although the venereal matter lies for many weeks in the passage, and over the whole glans, it seldom happens that any absorption takes place. As a further proof that these chords often arise from an inflammatory excoriation and tumefaction of the prepuce: A gentleman had a chancre on the right side, at the root of the prepuce, close to the penis, besides which there was an excoriation of the prepuce every where, with a thickening of that part. Although the chancre was on the right side, and the excoriation principally on the left, yet there was a hard chord along the left side of the penis leading to an enlarged gland in the groin. I have seen a case where blood has been discharged from the urethra, and the above symptoms have come on, and I at first suspected that the absorption had taken place where the vessel gave way; but as this symptom rarely happens, even where there has been a considerable discharge of blood, I am inclined to think that wounds are also bad absorbing surfaces, especially when I consider that few morbid poisons are absorbed from wounds.

XIII. SHORT RECAPITULATION OF THE VARIETIES IN THE SYMPTOMS.

From what has been advanced above, it must appear that the variety of symptoms in gonorrhœa, and their difference in different cases, are almost endless. I shall now recapitulate a few of the most material or common varieties. The discharge often appears without any pain, and the coming on of the pain is not at any stated time after the appearance of the discharge. There is often no pain at all, although the discharge be considerable in quantity, and of a bad appearance; the pain often goes off, while the discharge continues, and will sometimes return again. An itching in some cases is felt for a considerable time, which sometimes is suceeded by pain; though in many cases it continues to the end of the disease: on the other hand, the pain is often troublesome, and considerable even when the discharge is trifling or none at all. In general the inflammation in the urethra does not extend beyond an inch or two from the orifice: sometimes it runs all along the urethra to the bladder, and even to the kidnies, and in some cases spreads into the substance of the urethra, producing a chordee. The glands of the urethra inflame, and often suppurate; and I suspect that Cowper's glands sometimes do the same. The neighbouring parts sympathise, as the glands of the groin, the testicle, the loins, and pubes, with the upper parts of the thighs and abdominal muscles. Sometimes the disease appears soon after the application of the poison, as in a few hours, at other times not till after six weeks. It is often not possible to determine whether it is venereal, or only an accidental discharge arising from some unknown cause.

It may not be improper to mention here, that I have seen a chancre on the prepuce produce a pain in the urethra in making water; which most probably depended upon a sympathy similar to that by which the application of venereal matter to the glans produces a discharge from the urethra, as was observed above. If the application of venereal

matter to the glans can produce a discharge from the urethra, it is possible that any acrid matter, though not venereal, may have a similar effect. The discharge from the vagina, in cases of what is called *fluor albus*, is sometimes extremely irritating, in so much as to excoriate the labiæ and thighs; and the following history shews that it may sometimes produce effects similar to venereal matter.

Mr. and Mrs. ——— have been married these twenty years and upwards; she has for many years past been at times troubled with the *fluor albus*. When he has connection with her at such times, it generally, although not always, produces an excoriation of the glans and prepuce, and a considerable discharge from the urethra, attended with a slight pain. These symptoms commonly take a considerable time to go off, whether treated as a gonorrhœa or as a weakness. Is this a new poison? And does it go no further because the connection takes place only between two? What would be the consequence, if she were to have connection with other men, and these with other women? or if he were to be connected with another woman? Such cases, as far as I have seen, have only been in form of a gonorrhœa; they have not produced sores in the parts; nor, as far as I know, do they ever produce constitutional diseases.

CHAPTER II.

OF THE GONORRHOEA IN WOMEN.

The venereal disease in the form of gonorhœa in women, is not so complicated as in men; the parts affected are more simple, and fewer in number. But it is not so easily known in them as it is in men, because the parts commonly affected in women are very subject to a disease resembling the gonorrhœa, called *fluor albus;* and the distinguishing marks, if there are any, have not yet been completely ascertained. A discharge simply from these parts in women, is less a proof of the existence of the venereal infection than even a discharge without pain in men; therefore, in general, little or no attention is paid to it by the patient herself, and we often find the venereal virus formed in those parts without any increase of the natural discharge. The kind of matter gives us no assistance in distinguishing the two diseases; for it often happens that the discharge in the *fluor albus* puts on all the appearances of the venereal matter; and an increase of the discharge is no better mark, by which we can distinguish the one from the other. Pain, or any peculiarity in the sensations of the parts, is not a necessary attendant upon this complaint in women, therefore not to be looked for as a distinguishing symptom.

The appearances of the parts often give us but little information, for I have frequently examined the parts of those who confessed all the symptoms; such as increase of discharge, pain in making water, soreness in walking, or when they were touched, yet I could see no difference between these and sound parts. I know of no other way of judging in cases where there are no symptoms sensible to the person herself, or where the patient has a mind to deny having any uncommon symptoms, but from the circumstances preceding the discharge; such as her

having been connected with men supposed to be unsound, or her being able to give it to others; which last circumstance being derived from the testimony of another person, is not always to be trusted to, for very obvious reasons. Thus a woman may have this species of the venereal disease without knowing it herself, or without the surgeon being able to discover it, even on inspection. It may appear very strange, that a disease which is so violent and well marked in men, should be so obscure in women: but when we consider that this poison generally produces symptoms according to the nature of the parts affected by it, it becomes an easy matter to account in some measure for this difference.

When we attend to the manner, in which this disease is contracted by women, it is evident that it must principally attack the vagina, a part that is not endowed with much sensation, or action of any kind. While it is confined to the vagina, it may be compared to the same disease on the glans penis in men. In many cases however it extends much further, and becomes the cause of disagreeable feelings, producing a considerable soreness in all the parts formed for sensation, such as the inside of the labia, nymphæ, clitoris, carunculæ myrtiformes, the orifice of the meatus urinarius, and often affecting the urethra in its whole length. Those parts are so sore in some cases, as not to bear being touched; the person can hardly walk; the urine gives pain in its passage through the urethra, and when it washes the above-mentioned parts, which can hardly be avoided: such symptoms are not much encreased at one time more than another, excepting at the time of making water, and then principally in those who have the urethra affected; for as these parts are less exposed to circumstances of change, the increased irritation arising from such change of parts must necessarily in this sex be less; but in men the urethra, which is the part most commonly affected, has great sensibility, is capable of violent inflammation, is often distended with a stimulating fluid, and the body of the penis, urethra, and glans, stretching the passage with erections, always produce an increase of the symptoms, especially of the pain.

But as this disease frequently attacks parts more sensible than the

vagina, and which are more susceptible of inflammation, as has been observed, under such circumstances women have nearly the same symptoms as men; a fulness about the parts, almost like an inflamed tonsil, a discharge from the urethra, violent pain in making water, and great uneasiness in sitting, from pressure on those parts.

The bladder sometimes sympathises, producing the same symptoms as in men, and it is probable that the irritation may be communicated even to the kidnies. It has been asserted that the ovaria are sometimes affected in a similar manner to the testicles in men; I have never seen a case of this kind, and I should very much doubt its existence; for we have no instance in other diseases of the ovaria sympathising with those parts, or at least producing such symptoms as would enable us to determine that they did. That there are however uncommon symptoms every now and then taking place, would appear from the following case.

A lady had all the symptoms of a venereal gonorrhœa, such as a discharge, pain and frequency in making water, or rather a continued inclination to void it, and a heaviness approaching to pain about the hips and loins. The uncommon symptom in this case was great flatulence in the stomach and bowels; this last symptom was most probably a sympathy with the uterus: there may possibly be sympathies therefore with the ovaria.

The inflammation frequently goes deeper than the surface of the parts; often running along the ducts of the glands, and affecting the glans themselves so as to produce hard swellings under the surface on the inside of the labia, which sometimes suppurate, forming small abscesses, opening near the orifice of the vagina. These are similar to the inflammations and suppurations of the glands of the urethra in men. The different surface or parts which the disease attacks, make no distinction in the disease itself: it is immaterial whether it is a large or small surface, it only shows that in one case the parts are more susceptible of this irritation than in another, yet it may make the method of cure more complicated.

It sometimes happens, that the venereal matter from the vagina runs

down the perinæum to the anus, producing a gonorrhœa or chancres there.

How far the gonorrhœa in women is capable of wearing itself out, as in men, I cannot absolutely determine; but am much inclined to believe that it would; for I have known many women who have got rid of a violent gonorrhœa without using any means to cure it; and indeed the great variety of methods of cure made use of in such cases, all of which cannot possibly do good, though the patients get well, seems to confirm this opinion. One circumstance which appears as curious as any, is the seeming continuance of the disease in the vagina for years; at least we have reason to believe this, as far as the testimony of the patient can be relied on; and this long continuance of it, without getting well as it does in men, is probably owing to its being less violent in the vagina.

The following account of a lady having all the symptoms of gonorrhœa immediately after connection, shews how early in some cases the disease is produced; it was sent to me from Bath for my opinion upon it, drawn up by her medical attendant:

"A lady of a delicate habit of body, great sensibility of mind, and extreme irritability of the whole nervous system, in general had enjoyed good health until her present illness; which began in the following manner. The morning after her marriage she complained of great soreness, and swelling of the pudenda, attended with a good deal of pain, and difficulty in making water; this was considered as the natural consequence of her connection, and she continued her journey in a post chaise, though in much pain, that whole day. The following morning, her complaints were much increased, and a considerable discharge came on from the parts. In this situation she came to Bath a few days after; when I was desired to see her, I found her in an agony of distress, her husband having informed her, that from circumstances attending himself, he was apprehensive her complaints might prove venereal. Upon questioning him, I found that for some months he had had a running from the urethra, attended with heat of urine; that he had been under the care of a surgeon in the country, who had assured him

his disease was not venereal; that confiding in this assurance, he had married, not doubting that he was perfectly well, except a trifling gleet which remained still; he further stated, that in having connection with his wife, from the natural tightness of the parts he had not been able to penetrate; that in the attempt she complained of much pain, and some blood was discharged: upon examining his shirt, some discharge was observed upon it, and he still was troubled with heat of urine. I was at first inclined to hope, that (as women are not so easily infected with the venereal poison as men) all these complaints might be the consequences of the first connection, followed by a long and rapid journey in a post-chaise: I therefore ordered an opening mixture, and desired the parts might be fomented with a decoction of poppy heads, in milk and water, and a soft poultice of bread and milk applied. Finding no advantage from the use of these means, I examined the state of the parts affected, and found there was a considerable discharge of matter, principally from the urethra, the orifice of which was much swelled and inflamed, as well as the ducts of the glands on each side the urethra; there did not appear to be any discharge from the vagina; the hymen still appeared unbroken, and very firm and fleshy; the lacunæ from Cowper's glands on each side were very much inflamed, and there was a hard tumor on one side of the hymen, which afterwards suppurated. There was no appearance of disease any where about the labia or nymphæ. It was treated as venereal, and she went through a course of mercury, which was persisted in for some time; the abscess above mentioned burst; her mouth grew a little tender; her complaints were so much mended, that there was no doubt of a speedy and happy termination of her disorder, when she was seized with a most violent diarrhœa, which was with the utmost difficulty restrained. Mercurials of every kind were then left off; the former symptoms grew more troublesome, the heat of urine increased, and extended to the bladder, as appeared by the continuance of the pain for an hour or two after she had made water. She was now desired to rub about a drachm of mercurial ointment upon the thighs, labia, and inside of the pudenda: about this time another abscess formed, in nearly the same situation with the former, which was opened with a

lancet; this gave her much relief, the heat of urine went off in a great measure, but the discharge from the urethra, still continued as much as before; she continued the mercurial frictions, with great freedom during the healing of the abscess, insomuch that her mouth was greatly affected; she then left off the ointment for a little time, and soon after, the orifice of the urethra swelled and inflamed very much, the discharge greatly increased in quantity, and there was likewise a discharge of matter from the vagina; an injection of crude mercury rubbed down with mucilage of gum arabic till it was extinguished, and mixed with water, was ordered to be used twice or thrice a day; she had all along taken the almond emulsion with gum arabic, for her constant drink, and this was continued in large quantities; she also again resumed the use of the ointment as before, by which her mouth was at times made exceedingly sore.

"The disease had now continued nearly five months; the catamenia regularly appeared ever since her first complaint; at the last return of it she was free from pain, and the discharge as little as it had been at any time during her illness, and she continued free from uneasiness during that period, but soon after its cessation the heat of urine again returned in a most violent degree, and continued for an hour or two, with unabating violence; the orifice of the urethra again swelled as much as before. The discharge from the vagina at present is much the same, to which is superadded a shooting pain in almost every direction of that passage and the parts adjacent, which frequently recurs during the day. I can feel no swelling of any other part within the reach of my finger; nor does the pressure give pain in any direction. Being now fully persuaded that the venereal virus must be fully subdued, all mercurials are left off, and she uses only an injection of opium and thin starch, keeping the bowels open with a little castor oil now and then. Every fresh return of the ardor urinæ has been accompanied with a train of most distressing nervous symptoms, hysterics, and extreme dejection of spirits, and the pain is generally most violent in the night, though she drinks an astonishing quantity of diluting liquors with *gum arabic*, *pulvis tragacanth. comp.* &c. &c. and

has frequently taken opiates, from which she has certainly received relief; but as they always increase her nervous symptoms, she is greatly overcome by their use."

I. OF THE PROOFS OF A WOMAN HAVING THIS COMPLAINT.

It may be asked, what proof there is of a woman having a gonorrhœa when she is not sensible of having any one symptom of the disease, and none appears to the surgeon on examination? In such a case the only thing we can depend upon is, the testimony of those whom we look upon as men of veracity: such men assert that they have been infected by a woman in the situation above described, although they have had no connection for some months with any other woman. From this evidence it is reasonable to suppose that the disease has been caught from such woman; and it would seem to put it beyond a doubt when the same woman gives the disease, in this way, to more than one man. The case of the woman giving the disease to two men alternately at an interval of twelve months each time,* which gives a space of at least two years for the continuance of the disease, proves that its communication is almost the only criterion of its presence. The case too of the young woman at the Magdalen hospital† confirms the same opinion. Yet all this does not amount to an absolute proof, for a sound woman may have had connection with a man who had a gonorrhœa, or a man with chancres, and soon after, that is, perhaps within forty-eight hours, she may have admitted the embraces of a sound man; in such a case, it is very possible that he may receive the infection from that matter which was lodged in the vagina by the unsound man, and yet the woman may not catch the disease; for the matter may be washed away before it irritates the vagina, and this woman may be suspected of having a gonorrhœa, and apparently with great justice. A repetition of these circumstances may be the cause of many women appearing to have the disease for years, without really having it.

* See pages 39, 40. † See page 40.

CHAPTER III.

OF THE EFFECTS OF THE GONORRHOEA ON THE CONSTITUTION IN BOTH SEXES.

The disease I have been describing both in men and women, is local, and generally confined to the part affected, yet it sometimes happens that the whole constitution is more or less affected by it. Thus we find before there is any appearance of matter from the parts, that some patients complain of slight rigors: these are most considerable when the suppuration is late in taking place. A remarkable instance of this happened in a gentleman who had the infection twice,* the first time he assured me that it was six weeks between the time it was possible for him to have contracted the disease, and its appearance; and that for a considerable part of that time he had often been indisposed with slight rigors, attended with a little fever and restlessness, for which he could assign no cause; nor was he relieved by the usual remedies prescribed in such cases. A violent gonorrhœa came on, and these symptoms went off, which appeared to me to explain the case. The second time it was a month from the time of infection before the gonorrhœa appeared, and for some weeks of that time he was subject to a similar indisposition, which went off as before when the running came on. Here it would appear that we have something of a suppurative fever, which perhaps often happens in this disease; but the inflammation being small, and the fever therefore inconsiderable, it is commonly little noticed by the patient. The above gentleman not suspecting any such complaint in the first attack, had connection with his wife as usual, and was afraid,

* The case is mentioned before, page 39.

when the disease appeared, that he might have given it to her; but she never complained, which is a strong circumstance in confirmation of the principle laid down above, that it cannot be communicated but by matter.

These constitutional sympathies from local specific diseases, are the same from whatever cause they proceed; they are the sympathetic effects of irritation or of violence, and it is probable that all remote sympathies are, at least in this respect, similar; for if they were similar to their cause, it is most probable that they would produce in the constitution the same kind of disease which gave rise to them.

CHAPTER IV.

OF THE CURE OF GONORRHOEA.

From the idea which I have endeavoured to give of the venereal disease in genereal, showing that whatever form it appears in, it always arises from the same cause, we should be induced to suppose that since we have a specific for some of the forms of the disease, this specific should be a certain cure for every one; and therefore that it would be no difficult task to cure the disease when in the form of inflammation and suppuration upon the secreting surfaces of any of the ducts or outlets of the body; but, from experience, we find the gonorrhœa the most variable in its symptoms while under a cure; and the most uncertain in the cure, of any of the forms of this disease; many cases terminating in a week, while others continue for months, though under the same treatment.

The only thing necessary to be done for the cure is, to destroy the disposition and specific mode of action in the solids of the parts, and as that is changed the poisonous quality of the matter produced will also be destroyed; this is the cure of the disease, but not always of its consequences.

I have already observed, that this form of the disease was not capable of being continued beyond a certain time in any constitution; and that in cases where it was violent, or lasted very long, it was owing to the parts being very susceptible of such irritation, and readily going on with it. As we have no specific medicine for gonorrhœa, it is fortunate that time alone will effect a cure: it is therefore very reasonable to suppose, that every such inflammation gets well of itself; yet although this appears to be nearly the truth, it is worthy of consideration, whether

medicine can be of any service in this form of the disease. I am inclined to believe it is very seldom of any kind of use, perhaps not once in ten cases; but even this would be of some consequence, if we could distinguish the cases, where it is of service, from those, where it is not. Upon this idea of every gonorrhœa curing itself, I gave certain patients pills of bread, which were taken with great regularity; the patients always got well, but some of them, I believe, not so soon as they would have done had the artificial methods of cure been employed.

The methods of cure hitherto recommended, and still practised by different people of the profession, are of two kinds, consisting either of internal remedies, or local applications; but in whichsoever of these two ways this disease is to be treated, we are always to pay more attention to the nature of the constitution, or to any attending disease in the parts themselves, or parts connected with them, than the disease itself.

The nature of the constitution is principally to be learnt from the local effects; for the local effects of this poison are so different in different people as to require a treatment suited to each variety; but this has been too little attended to, from every one endeavouring to attack the immediate symptoms, as if they had a specific for gonorrhœa.

Whether the cure be attempted constitutionally, locally, or in both ways, nearly the same principles are to be adhered to, except when evacuations are made use of, for we cannot evacuate locally.

The first thing to be considered is, the inflammation itself, whether violent or mild, whether common or irritable; yet even where this is ascertained, we have not in all cases the cure in our power; for I have already observed, that some people are very susceptible of this irritation, who are as it were insensible to others; and on the contrary, many are easily affected by common inflammation, who are insensible to this. These last are rather uncommon dispositions, and the cure being always easy they demand little attention. When the symptoms are violent, but of the common inflammatory kind, which is to be collected from the attending circumstances, particularly the extent of the inflammation not exceeding the specific distance, the local mode of cure may be either

irritating or soothing, till the original violence is over. Irritation in the present case may be attended with less danger than in the irritable inflammation,* and may alter the specific action; but to produce this effect it must be greater than the irritation from the original injury. The parts would afterwards recover of themselves, as from any other common inflammation. After all, however, I believe the soothing plan is the best at the beginning. If the inflammation be great, and of the irritable kind, no violence is to be used in the cure, for it will only increase the symptoms, unless we know that the great degree of inflammation arose entirely from a susceptibility of this irritation, and that there was no general irritability in the constitution, which seldom can be ascertained. In cases where the symptoms run high, nothing should be done that may tend to stop the discharge, either by internal or external means, for by this nothing would be gained; as merely stopping the discharge does not put an end to the inflammation. The constitution is to be altered, if possible, by remedies adapted to each disposition, with a view to alter the actions of the parts arising from such dispositions, and reduce the disease to its simple form. If the constitution cannot be altered, nothing is to be done but to allow the parts to tire themselves out by a continuance of the same action.

When the inflammation has considerably abated, the disease only now remaining in a mild form, it may be attacked either by internal remedies, or local applications. If it be attacked locally, violence is still to be avoided; because it may bring back the irritation. At this period gentle astringents may be applied with a prospect of success; or if the disease has begun mildly, and there are no signs of an inflamma-

* It is very difficult to give clear ideas of distinctions in disease, when they are not marked by something permanent as to time, space, &c. I have used the term *irritable inflammation*, because I think this kind of inflammation takes place more in weak irritable habits than in others: it appears to be guided by no law that I am acquainted with. It may be called an ill formed inflammation, as not going through the usual process to a natural termination, but continuing with little variation; and if such inflammation took place in the cellular membrane, it would rather produce an œdematous swelling than such as arises from the extravasation of coagulable lymph, which takes place in what I would call the true or healthy inflammation.

tory disposition, either of the common or the irritable kind; in order to get rid of the specific mode of action quickly, an irritating injection may be used, which will increase the symptoms for a time, but when it is left off they will often abate, or wholly disappear. In such a state of parts, astringents may be used; for the only thing to be done, is to procure a cessation of the discharge, which is now the principal symptom. It is very common when the discharge istopped by an injection, even of a mild kind, to have an uneasy sensation in the perinæum, and continued on to the bladder, producing frequency in making water, and on the return of the discharge these sensations immediately cease.

In those cases where the itching, pain, and other uncommon sensations begin and go on long before the discharge appears, I should be inclined to recommend the quieting or soothing plan instead of the irritating, with a view to bring on the discharge, as that effect is a step towards a resolution of the irritation; but how far it would really be the proper plan I cannot absolutely say, not having had experience enough in such cases. One thing however I think I may assert from reasoning, that to use astringents would be bad practice, as they would rather tend to prevent the discharge from taking place, which might prolong the inflammation and protract the cure. In cases of stricture, or in cases of diseased testicles, I believe astringents should not be used, for we find in either case, while the discharge lasts, both complaints are relieved; therefore it should be left to itself more than when all the parts are otherwise sound. If we had a specific for venereal gonorrhœa, the question would be, would this specific cure the irritation, before the full action should have taken place?

I. OF THE DIFFERENT MODES OF PRACTICE—EVACUANTS—ASTRINGENTS.

The remedies commonly recommended in gonorrhœa are of two kinds, *internal* and *local*. The former may be divided into evacuants, and astringents.

The evacuants are principally of the purgative or diuretic kind,

without being confined to any particular medicines of these classes, every practitioner supposing that he is in possession of the best. Some use mercurial evacuants, while others carefully avoid mercury in every form. The neutral salts have been given from the idea of their being cooling. Some of the profession have kept principally to diuretics, perhaps with two views, as evacuants acting upon the urinary passages mechanically to wash off the venereal matter, or as specifics for the latter purpose: nitre has been given with this view; besides, it has been supposed to lessen inflammation; but its powers in this way I very much doubt. Under these different modes of treatment the patients always get well, and the cures have been ascribed by each to his own method of treatment.

Keeping the body open in most cases, even when the patient is otherways in health, must no doubt be proper; but what idea can we form of an irritation produced all along the intestinal canal, curing a specific inflammation in the urethra; yet there are cases where a brisk purge has been of service, and even in some has performed a cure; but I suspect that in such cases the disease was continued by habit only, and that this practice therefore would not have succeeded in the beginning of the same disease. A gentleman had a gonorrhœa, all the symptoms of which continued for two months, and by taking at once ten grains of calomel, which purged him most violently, he was almost immediately cured. The calomel could not have acted specifically, but by a kind of derivation, that is, an irritation produced in one part, curing one that subsisted in another: but even if it should be granted, that in some constitutions purges have the power of making the solids less susceptible of this irritation, it cannot be supposed they will have this effect in every case; in some constitutions they might debilitate, increase irritability, and of course increase the symptoms. These contrary effects must take place in different constitutions in which a medicine has no specific action. On the supposition of the cure being promoted by an evacuation from the blood, what service can purging out some of the blood in form of a secretion from one part do, to an inflammation of another part? On such a supposition, would not a sweat, or an increase

of saliva by chewing tobacco, or stimulating the nose by snuff, all tend equally to cure a gonorrhœa? But humors having been considered as the universal cause of every disease, especially those in which pus was formed, or a discharge produced, and purging having been supposed to be the cure for humors, purgatives were of course made use of in this disease; and as the patients always got well, the practice became generally established.

Those who recommended mercury in this form of the disease, did it most probably from the opinion that this medicine was a specific for the venereal disease in all its forms. On this supposition we can see some reason for their practice, as it would be absorbed from the intestines, circulate through the inflamed vessels of the urethra, and thereby destroy the venereal irritation. Here we can only suppose it to act by its specific virtue; but I doubt very much of mercury having any specific virtue in this species of the disease, for I find that it is as soon curable without mercury as with it; and where it is only used as a purge, or purged off the next day, and therefore only allowed to act upon the bowels, I cannot conceive that it could have any more effect upon the venereal inflammation in the urethra, than an irritation in the bowels arising from any other purgative. So little effect indeed has this medicine upon a gonorrhœa, that I have known a gonorrhœa take place while under a course of mercury sufficient for the cure of a chancre. Whether the gonorrhœa arose from the same infection that produced the chancre I cannot say, nor can it be easily determined in such cases. Men have also been known to contract a gonorrhœa when loaded with mercury for the cure of a *lues venerea*, the gonorrhœa nevertheless has been as difficult of cure as in ordinary cases.

A gentleman put himself under my care on the 27th of June, for the cure of two chancres and a buboe. I dispersed the buboe, but as he disliked the unction, I was obliged to substitute *mercurius calcinatus* instead of it, giving two grains in the evening and one in the morning. About the middle of July his mouth became sore, and the mercury was left off; we began its use again in a week, and he appeared to be quite well of his venereal complaints. I however continued the

use of mercury, keeping his mouth sore, and on the 16th of August, while in this state, he had connection with a woman, both on that and the following evening, and in five days after, a gonorrhœa appeared, and proved to be very violent. Another gentleman, while under a course of mercury for the cure of chancres, had connection with a woman before he left off the use of mercury, and in two days a gonorrhœa made its appearance.

The same general observations may be made with respect to diuretics.

It is possible that specific medicines taken into the constitution, (if we had such) and passing off by urine, might act upon the urethra in their passage through it. The balsams and turpentines pass off in this way, and become specifics for many irritations in the urinary passages; but how far medicines, which have the power of affecting particular parts when sound, or when under diseases peculiar to those parts, have also the powers of affecting a specific irritation in these parts, I know not; but I do not believe they have any considerable powers in this way; it is possible however, that they may remove any attending irritation, although not the specific one. Diuretics have nevertheless their advantages, for if they produce a greater quantity of water, they do good; but I believe this had better be effected by simple water, or water joined with such things as will encourage the patient to drink a good deal, as tea, capillaire, orgeate, and the like.

Astringents, although often given, yet have always been condemned by those who have called themselves the judicious and regular practitioners; because, according to them, there is something to be carried off, and if that is not carried off a lues venerea is to be the consequence. This reasoning is not just, and therefore the thing to be considered is, do they, or do they not assist us in the cure of the gonorrhœa? I believe they do not in any case lessen the venereal inflammation; but certainly they often lessen the discharge. As that effect, however, does not constitute a cure, it is not necessary to produce it.

I can conceive that a combination of astringents, especially the specific astringents of those parts, as the balsams, with any other medicine which may be thought to be of service, may help to lessen the discharge

in proportion as the inflammation abates; and this I have often seen, as will be explained more at length hereafter.

II. OF LOCAL APPLICATIONS—DIFFERENT KINDS OF INJECTIONS—IRRITATING—SEDATIVE—EMOLLIENT—ASTRINGENT.

Local applications may be either internal to the urethra, external to the penis, or both; all of which will in many cases be necessary. The internal, or those applied to the urethra, would seem the most likely to cure this species of disease, by coming immmediately in contact with the diseased parts; for if they have any power of action, whatever that be, it must be in opposition to the venereal irritation; therefore, we might suppose that most irritations that are not venereal would tend to a cure: but certainly this is not universally the case. If, on the contrary, the applications are such as quiet irritation, they must also be of service,

Local applications to the urethra may be either in a solid or fluid form, each of which has its advantages and disadvantages. A fluid is only a temporary application, and that of very short duration, and is similar to the washing of a sore, which is, I believe, in most cases unnecessary; for I imagine that matter, from any sore whatever, is always such as cannot stimulate that sore into any action; it can be of no consequence therefore whether the matter is allowed to lie upon it or not; but by removing it the medicines are allowed to come in contact with the inflamed surface. I apprehend it is only in this way the removal of it can be of service. The solid applications may remain a long time, and are similar to the dressings in the case of a wound. When the parts are not so much inflamed as to prevent their use, they would appear to have an advantage over the fluid applications by their continuance; but they in general irritate immediately, from their solidity alone. These applications must be in the form of a bougie; but I should be inclined to suppose, that the less use we make of bougies when these parts are in an inflamed state, the better; although I cannot say that I ever saw any bad effect from them in any case, when properly applied.

Fluid applications to the inside of the urethra are commonly called injections; and, like the internal remedies, are without number; every one thinking, or wishing to make the world think, that his own is the best. But the great variety of injections, and every venereal inflammation getting well during their use, which was likewise observed to happen when internal medicines are given, are strong corroborating circumstances in favour of the opinion, that every such complaint will in time cure itself; I think however it appears from practice, that an injection will often have almost an immediate effect upon the symptoms, therefore they must have some powers; and yet the kind of injection which would have the greatest specific powers, I believe, is not yet known: if an injection has no specific powers, it must be very uncertain in its effects, and can only be of service as far as it may be adapted to a peculiarity of constitution or parts. As injections are only temporary applications, it becomes necessary to use them often, especially in cases where they are found to be of service: they should therefore be applied as often as convenient, perhaps every hour, or even oftener; but this must be regulated in some measure by the kind of injection; for if it be irritating it will not be proper to use it so often, as it may be productive of bad consequences.

Many injections immediately, or at least soon after their application, remove the symptoms, and prevent the formation of matter, which has given rise to the notion of their shutting up the disease, and driving it into the constitution: but this supposed mode of producing a constitutional complaint, is the reverse of what really happens; for I have already endeavoured to prove, that matter is the only substance in which the poison is contained, and that the formation of the poison is inseparable from the formation of matter; therefore if we can prevent the one the other cannot take place, and of course there can be no room for absorption, so that there can neither be any power of infecting the constitution in the same person, nor of communicating the infection to others.*

* Vide page 12, what was said on the method of contracting the lues venerea.

When the discharge is an effect of present inflammation it may be stopped by injections, though the inflamation still continues in some degree, and may afterwards be removed without the discharge ever re-appearing. But I believe that by this practice little is gained, for the effect of the inflammation is not the disease which we wish to remove; however we find that the same method which stops the discharge, also removes the inflammmation, although not always, and only, I believe, when the inflammation is slight.

I shall divide injections, according to their particular effects upon the urethra, into four kinds; the irritating, sedative, emollient, and astringent. A specific, I believe, is not yet discovered, although a mercurial injection in some form or other is by most people supposed to be possessed of such a power, and of course this mineral makes part of many of the injections now in use.

Irritating injections of whatever kind, in this disease act upon the same principle, that is by producing an irritation of another kind, which ought to be greater than the venereal, by which means the venereal is destroyed and lost, and the disease is cured, although the pain and running may still be kept up by the injection, yet those effects will soon go off when the injection is laid aside, because they arise only from its irritating qualities. In this way bougies, as well as many injections, may be supposed to cure; and although they increase the symptoms for the time, they never can increase the disease itself, any more than the same injection which would produce the same symptoms if applied to the urethra of a sound man can communicate the disease. Most of the irritating injections have an astringent effect, and prove simply astringent when mild, their irritating quality depending chiefly upon their strength.

As irritating injections do not agree with all inflammations arising from the venereal poison,* it may be asked, in what cases are the irritating injections to be used with advantage? This I have not been able to determine absolutely; but I think irritating injections should never

* For I have already remarked, that the inflammation varies according to the constitution.

be used where there is already much inflammation, especially in constitutions, which cannot bear a great deal of irritation, as a previous knowledge of the disease in the same person sometimes teaches us; nor should they be used where the irritation has spread beyond the specific distance; nor where the testicles are tender, nor where, upon the discharge stopping quickly, they have become sore; nor where the perinæum is very susceptible of inflammation, and especially if it formerly has suppurated; nor where there is a tendency in the bladder to irritation, which is known from the patient having had for some time a frequency in making water. In such cases I have not succeeded with them; they not only do no good, but they often do harm; for I have seen them make the inflammation spread further in the urethra;* and I think I have had reason to suspect that they have been the cause of abscesses *in perinæo*. But in cases that are mild, and in constitutions that are not irritable, injections often succeed, and remove the disease almost immediately. The practice however ought to be attempted with caution, and not perhaps till milder methods have failed: two grains of corrosive sublimate dissolved in eight ounces of distilled water, or rose-water, is nearly as good an injection as any of the kind. But an injection of only half this strength may be used, where it is not intended to attempt a cure so quickly. If however the injection, even in that proportion, gives considerable pain in its application, or if it occasions a great increase of pain in making water, it should be diluted.

Sedative injections will always be of service in cases where the inflammation is considerable, not by lessening the disease itself, but by lessening the diseased action, which always allows the natural actions of the part more readily to take place; they are likewise very useful in relieving the painful feelings of the patient. Perhaps the best sedative we have is opium, as well when given by the mouth or anus as when applied to the part affected in the form of an injection. But even opium will not agree, or act as a sedative in all constitutions or parts;

* It is however to be remarked, that this symptom is not always to be attributed to the injections, for it often happens when none have been used.

on the contrary, it often has opposite effects, producing great irritability. Lead may be reckoned a sedative, so far as it abates inflammation, while at the same time it may act as a gentle astringent Fourteen grains of saccharum saturni, in eight ounces of rose water, make a good sedative astringent injection.

The drinking freely of diluting liquors may perhaps be considered as having a sedative effect, as it in part removes some of the causes of irritation, rendering the urine less stimulating, either to the bladder when the irritation is there, or to the urethra in its passage through it; and it is possible that diluting may lessen the susceptibility of irritation. The vegetable mucilages of certain seeds and plants, and the emollient gums are recommended; but I suspect that this practice is founded on a mechanical notion, and that none of them are of much service. I believe the advantage arises chiefly from the quantity of water that is drank, therefore if the water be joined with any thing, spirits excepted, that can induce the patient to drink freely, the purpose is fully answered. I have however been informed by some patients that they thought when the liquids they drank were impregnated with those substances, they had less uneasiness in making water.

Emollient injections are the properest applications where the inflammation is very great; they are most probably useful by first simply washing away the matter, and then leaving a soft application to the part; in which way I can conceive them to be of singular service, by lessening the irritating effects of the urine; and indeed practice proves this, for we often find that a solution of gum arabic, milk and water, or sweet oil, will lessen the pain and other symptoms, when the more active injections have done nothing, or to appearance have done harm.

It very often happens that the irritation is so great at the orifice of the urethra, that the point of the syringe, cannot be suffered to enter; when this is the case nothing should be done in the way of injection till the inflammation abate. Emollients may likewise be used externally in form of fomentation.

The astringent injections can only act by lessening the discharge, they

can have no specific effect upon the inflammation; but as they must affect the actions of the living powers, it is possible they may alter the venereal disposition. They should only be used towards the latter end of the disease, when it has become mild, and the parts begin to itch. But this should be according to circumstances, and if the disease began mildly they may be used at the very beginning; for by gradually lessening the discharge without increasing the inflammation, we complete the cure, and prevent a continuation of the discharge, called a gleet. Injections of this kind very probably stimulate in such á way as to make the vessels of the part contract, and probably hinder the act of secretion; we can hardly suppose that they act chemically by coagulating the juices. They will have an irritating quality if used strong, which in some measure destroys their astringency, or rather makes the parts act contrary to what they would do from the application of a simple astringent; so that they often increase the discharge instead of lessening it, by which means the disease also may be cured, in the same way as by irritating injections, that is by altering the disposition of the inflammation. When more mild, they often stop the discharge, without however in all cases hastening the cure; for the inflammation may still continue even longer than it otherwise would have done if the tendency to secretion had not been stopped; for I have already observed, that a surface that discharges has assumed the complete action of the disease, which is one step towards a cure or termination. However it sometimes happens, that an astringent injection will cure a slight irritation in a very few days. My experience has not taught me that one astringent is much better than another.

The astringent gums, as dragon's blood, the balsams, and the turpentines dissolved in water; the juices of many vegetables, as oak bark, Peruvian bark, tormentil root, and perhaps all the metallic salts, as green, blue, and white vitriols; the salts of mercury, and also alum; probably all act as far as we yet know much in the same way; although we may assert that they do not always act equally well in every gonorrhœa, for on our changing the injection a new one will sometimes succeed after several others have been tried in vain.

The external applications are generally poultices, and fomentations; but they can be of little service, except when the external parts, such as the prepuce, glans, and orifice of the urethra, are in some degree inflamed; the last indeed is almost always more or less affected.

When the glands of the urethra are swelled so as to be felt externally, the application of mercurial ointment to the part may be proper, but most probably this will be of more service after the inflammation has subsided. Indeed mercurial ointment is often applied to all the external surfaces of those parts when in a state of inflammation, with an emollient poultice over it; but I am not perfectly satisfied of the utility of this practice.

The Editor has for many years left off entirely the use of injections in the cure of Gonorrhœa, from finding that they so often lay the foundation for strictures, and in many cases aggravate, and extend the symptoms they are intended to relieve; nor does he find that his success in treating gonorrhœa has been less, since he left off the use of injections. His mode of practice has been more satisfactory to himself, and less hazardous to his patients, since swellings of the testicles, irritation in the bladder, and strictures in the urethra are rare occurrences after gonorrhœa in his own immediate practice.

CHAPTER V.

OF THE CURE OF GONORRHOEA IN WOMEN.

In women the cure of the gonorrhœa is nearly the same as in men; but the disease itself being milder, and the secondary symptoms less numerous in women, owing to there not being so many parts to be affected, and to these parts not being either of so great extent, or so liable to inflammation, the cure becomes more simple.

When the disease is in the vagina only, it is easily cured. Injections are the best means that can be used, and after injecting, it may be proper to anoint the parts as far up as possible with mercurial ointment,* and also to wash the external parts often with the injection.

If the inflammation has attacked the urethra, injections there cannot be so conveniently used, as it is almost impossible for the patient to throw an injection into that canal.

The injections recommended in the cure in men are equally serviceable here, but they may be made doubly strong, as the parts are not nearly so irritable as the common seat of this disease in men.

If what I have said of the disease in women, be just, we must see that it will be a difficult thing to say, with any degree of certainty, when the patient is well; because whenever the symptoms are gone, the surgeon and the patient will naturally suppose the cure to be complete; but a new trial of those parts may prove the contrary; or in cases where the disease has never affected the urethra, but only the vagina, and still more where no symptoms have ever been observed, it will be more difficult to fix the date of the cure; but general experience must direct the practitioner.

* How far mercurial ointment assists in the cure, I have not been able to determine; the practice rather arises more from a kind of practical analogy than real knowledge of its use in such cases.

When the inflammation runs along the ducts of the glands, whether those of the mouth of the vagina, or urethra, or affects the glands themselves, the same method is to be followed; in particular the mercurial ointment is to be freely applied to the parts. If the inflammation on the mouths of the ducts is so great as to shut them up, the ducts and glands will suppurate and form abscesses; in such cases it will be necessary to open them, or enlarge the opening already formed, and dress the abscess as a chancre or buboe.

In the case of a simple running, the constitutional treatment will be taken notice of hereafter; but if any suppuration take place, the constitution is to be treated as in chancres or buboes; for most probably absorption will take place, and its effects must be guarded against.

The Editor feels it a duty to the public to state, that two instances have come within his notice, of young women, who had been infected with gonorrhœa, by the men who debauched them, having been treated by irritating injections, under the care of a surgeon of considerable practice, who not making allowance for the sensibility of the vagina, before it had been much used, unfortunately for his patients, directed the injections to be made of the same strength, as for common women; the consequence of which was, that the sides of the vagina were united together by the adhesive inflammation.

CHAPTER VI.

OF THE TREATMENT OF THE CONSTITUTION IN THE CURE OF GONORRHOEA.

In the cure of gonorrhœa, the constitution is in some cases to be as much attended to as the parts affected, if not more; but in general this is not necessary. The knowledge of the constitution is to be obtained in a great measure from the local symptoms, and as far as the constitutional treatment can be made similar to the local, they should correspond.

We find in many strong plethoric constitutions, where both the powers and actions are great, that the symptoms are often violent. These constitutions have generally a strong tendency to fever of the inflammatory kind; and, probably, the most distinguishing mark of such a constitution will be, that, of the symptoms not extending beyond the specific distance. Many medicines which might be of service in another constitution will often prove hurtful here, in so much as to increase the very symptoms which they were meant to relieve. I have seen even opiate clysters, though they relieved at first, yet in the end produce or increase fever, and by that means increase all the symptoms. I have seen the balsam of capivi given in such cases increase the inflammatory symptoms, probably by stopping the discharge in part, which appears to be salutary.

The treatment of such a constitution, when affected with this disease, consists chiefly in evacuations, the best of which are bleeding and gentle purging.

To live sparingly, and above all to use little exercise, is necessary; for although such a treatment does not lessen the venereal irritation, yet it removes the violence of the inflammation, and allows the parts to relieve themselves. In this kind of constitution, therefore, the disease is in the end soonest cured, as there is not a disposition to continue inflammation long.

In the weak and irritable constitution, the symptoms are frequently very violent, arising from great action in the parts, and often extend beyond the specific distance; the inflammation running along the urethra, and even affecting the bladder. Instead of evacuation, which would rather aggravate the symptoms than relieve them, the constitution should be strengthened, which will make it less susceptible of irritation in general.

I have seen patients whose constitutions were such, that they were never sure of twenty-four hours health, and were always expecting when well, to be ill soon, where the inflammation has been both considerable, and extensive; I have seen evacuations tried, and the symptoms increased; but as soon as the bark was given freely, they have become almost immediately mild; and without using any other medicine the patients have got soon well. The medicine here acted upon the constitution, destroyed the irritability, gave the parts a true and healthy sensation of the venereal irritation, and brought the inflammation to that state in which it ought to be in a healthy subject, whereby the constitution was enabled to cure itself.

So capricious sometimes is this form of the disease in its cure, that I have seen, by an accidental fever coming on, the discharge stop, the pain in making water go off, and the gonorrhœa finally terminate with the fever.

In others I have seen all the symptoms of the gonorrhœa stop by the coming on of a fever, and return again when it went off. In some I have seen a gonorrhœa begin mildly, but a severe fever coming on, and continuing for several days, has greatly increased the symptoms, and on the fever going off, the gonorrhœa has also gone off. Although a fever does not always cure a gonorrhœa, yet, as it may, nothing should be done while the fever lasts; and if it continues after the fever is gone, it is then to be treated according to the symptoms. A gentleman while using an injection for a gonorrhœa was seized with a vomiting and purging, which brought on a fit of the piles; they bled profusely: as soon as he recovered from these attacks he found that all the symptoms of gonorrhœa had gone away.

Unfortunately there are cases where no known method lessens the symptoms; evacuations have produced no abatement, the strengthening plan has been as unsuccessful: sedatives and emollients have procured no relief; and time alone has performed the cure. With such the soothing plan, I believe, is the best, till we know more of the disease. Astringents should not be used; their action upon the inflamed parts is uncertain, for they often do not lessen the inflamation or the pain, although they may perhaps lessen the discharge The turpentines, especially the balsam of capivi, and Canada balsam, lessen the disposition of the parts to form matter, which effect has always a salutary appearance; but as they have not at the same time the power of lessening the inflammation, they can be of little service.

Besides the various effects arising from the difference of constitution in the gonorrhœa, we find that it is considerably affected by the way of life, during the inflammatory state, and also by other diseases attacking the constitution at the same time. But this is common to all other diseases: for whenever we have a local disease, in which light I have considered a gonorrhœa, it is always affected by whatever affects the constitution. Most things that hurry, or increase the circulation, aggravate the symptoms, such as violent exercise, drinking too much of strong liquors, eating strong indigestible food; some kinds of which act specifically on these parts, and thereby increase the symptoms more than simply heating the body, such as peppers or spices of all kinds, and spirits.

From what has been said in general, it must appear that a gonorrhœa is to be cured in the same way as every other inflammation: and it must also appear, that all the methods used are only to be considered as correctors of irritations in general, and of disordered circulation. In cases that have begun mildly, where the inflammation has been but slight, or in those cases where the violent symptoms above taken notice of have subsided, such medicines as have a tendency to lessen the discharge may be given along with the local remedies before mentioned. The turpentines I believe are the most efficacious; cantharides; the salts of some metals, such as of copper, zink, and lead, and also of

some earths, as alum, are strongly recommended as astringents when given internally.

Whatever methods are used for the cure, either locally or constitutionally, it is always necessary to have in view the possibility of some of the matter being absorbed, and afterwards appearing in the form of a lues venerea; to prevent which I should be inclined to give small doses of mercury internally. At what time this mercurial course should begin I am not certain, but if the observation be just, that a disposition once formed is not to be cured by mercury, but that mercury has the power of preventing a disposition from forming, as was formerly explained, we should begin early and continue it to the end of the disease, till the formation of venereal matter ceases, and even for some time after. The mercurial ointment may be used where mercury disagrees with the stomach and intestines, which is sometimes the case.

This practice appears to be more necessary if the discharge has concontinued a considerable time, and especially if the treatment has been simply by evacuants, for in the former there is a greater time for absorption, and in the latter we may suppose a greater call for it, such medicines having no effect in carrying off the virus.

The quantity of mercury necessary will be proportioned to the duration of the disease; a grain of mercurius calcinatus made into a pill, and taken every night, or one at night and another in the morning, may be sufficient.

The success of this practice in any particular case can never be ascertained, because it is impossible to say when matter has been absorbed, except in cases of buboes; and where it is not known to be absorbed, it is impossible to say that there would have been a lues venerea if mercury had not been given, as very few are infected from a gonorrhœa, although they have taken no mercury. It is however going upon the surest grounds to give mercury, as we may reasonably suppose it will often prevent a lues venerea, as it does when given during the cure of a chancre or buboe, where we know from experience that without it, lues venerea would certainly take place.

CHAPTER VII.

OF THE TREATMENT OF OCCASIONAL SYMPTOMS OF GONORRHOEA.

As the following symptoms are only occasional consequences of venereal gonorrhœa, being the effects of an irritation on the urethra, and therefore not venereal, they are to be treated in the same manner as if they arose from any other cause.

I. OF THE BLEEDINGS FROM THE URETHRA.

I have already observed, that when the inflammation is violent, or spreads along the urethra, there is frequently a discharge of blood from the vessels of that part. In such bleedings I have seen the balsam of capivi given internally of service, and I should suppose that all the turpentines would be useful. I cannot say that I have done any good by astringent injections; and in some cases, I have even suspected that they have been the cause of this complaint. They always go off in the usual time of the cure of the gonorrhœa.

II. OF PREVENTING PAINFUL ERECTIONS.

Opium given internally appears to have great effect in preventing painful erections in many cases; I have known twenty drops of tinctura thebaica taken at bed time procure ease for a whole night; I think the cicuta has likewise some powers in this way.

III. OF THE TREATMENT OF THE CHORDEE.

In the beginning of this complaint, bleeding from the arm is often of service, but it is of more immediate service to take away blood from the part itself by leeches; for we often find by a vessel giving way in the urethra, and a considerable hæmorrhage ensuing, that the patient is greatly relieved. Fomenting the penis by holding it over the steam of warm water will give ease, as will also poultices; and if camphire be added to the fomentation and poultice, it will in many cases assist in taking off the inflammation. Opium given internally is of singular service, and if joined with camphire the effect will be still greater; but opium in such cases acts rather by lessening the pain than by removing the inflammation, though by preventing erections it may be said to obviate the immediate cause of the complaint.

When the chordee continues after all other symptoms are gone, I believe that little or nothing in the way of evacuation is necessay, the inflammation being gone and a consequence of it only remaining, which will go off gradually by the absorption of the extravasated coagulable lymph; therefore bleeding in this case can be of no use. Rubbing the parts with mercurial ointment will promote the absorption of the extravasated coagulable lymph, for we find that mercury has considerable powers in exciting absorption; the friction also will be of use. In one case I thought I saw considerable benefit from giving the cicuta, after, I had tried the common methods of cure. Electricity may be of service.

This symptom is often longer in going off than either the running or pain, but no bad consequences arise from it; its declension is gradual and uniform, as happens with most consequences of inflammation.

In relieving the chordee, or the remains of it which appear to arise from spasm, I have known the bark of great service. Evacuations whether from the part, or from the constitution, generally do harm.

IV. OF THE TREATMENT OF THE SUPPURATION OF THE GLANDS OF THE URETHRA.

Suppurations in the glands of the urethra, I suspect, should be treated as chancres, therefore mercury ought to be given, as will be explained in speaking of that form of the disease.

Should a suppuration take place in Cowper's glands, it demands more attention; the abscess must be opened freely, and pretty early, as the matter, if confined, might make its way either into the scrotum or urethra, which would be productive of bad consequences. Here also mercury, I believe, must be given, and perhaps as freely as in a buboe; in short, the treatment should be the same as in a venereal ulcer; and in this respect it will differ from the treatment of those abscesses which arise in consequence of stricture, to be taken notice of hereafter.

V. OF THE TREATMENT OF THE AFFECTION OF THE BLADDER.

When the disease extends as far as the bladder, I do not know a more troublesome complaint. It is however one of those complaints from which seldom or ever any ultimate bad consequences arise, and, in general, it will get well of itself; but I suspect that it sometimes lays the ground-work of future irritation in that viscus, which may prove very troublesome, and even dangerous; but this is only conjecture.

Opiate clysters, if nothing in the constitution forbids the use of them, procure considerable temporary relief. The warm bath is of service, although not always; and bleeding pretty freely, if the patient is of a full habit, often gives great relief; leeches also applied to the perinæum have good effects; but in many constitutions bleeding will rather do harm; and I believe we should be cautious in making use of this evacuation. for I have already observed, that many of these cases are rather sympathetic than inflammatory. How far an opiate plaister applied to

the region of the pubis would be of service I do not know. If applied to the small of the back, or origin of the nerves of the bladder, it might perhaps be of use; and probably a small blister on the perinæum would answer in such cases, as well as it does in those irritations of the bladder, which arise from other causes, as will be taken notice of hereafter. But in spite of every attempt, the affection of the bladder often continues for a considerable time, producing other sympathies in the neighbouring parts.

VI. OF THE TREATMENT OF THE SWELLED TESTICLE.

When the testicle sympathises either with the urethra or bladder, and inflames, I believe that rest is the best remedy; lying in an horizontal position is the easiest, as such a position of body is the best for a free circulation. If the patient cannot submit to an horizontal position, it is absolutely necessary to have the testicle well suspended; indeed the patient's feelings will make him fly to that expedient the moment he is acquainted with the ease it procures.

In this complaint perhaps there is no particular method of cure; it is to be treated as inflammation in general, by bleeding and purging, if the constitution requires them, fomentation, and poultices. Bleeding with leeches I have often seen of service, although we cannot well account for this, as the vessels of the scrotum have but little connection with those of the testicle.

As I do not look upon the swelling of the testicle to be venereal, mercurials can be of no service in these cases when in a state of inflammation, but are useful when the inflammation is gone, and the induration only remains.

Vomits have been recommended in such cases, and are sometimes of service. I have known a vomit act like a charm; however this is not a constant effect. The effects of the vomit most probably arise from the sympathy between the stomach and the testicle. Opiates are of service, as they are in most irritations of those parts. When such swellings

suppurate, which they seldom do, they require only to be treated as common suppurations, and mercury need not be given.

In the history of this disease I observed, and indeed it has been observed by most writers, that when a swelling came upon the testicle in consequence of a gonorrhœa, the running stopped; or when the running stopped, the testicle swelled; but which was the cause, or which was the effect, has not yet been ascertained. It has been also observed, that when the running returned, the testicle then showed the first symptoms of recovery, so that by the testicle loosing its sympathising action, the action was restored to the urethra. And here also it has not yet been ascertained, which is the cause, and which is the effect; but from a supposition that the stopping of the discharge in the urethra was the cause of the swelling, it has been attributed to the mode of treatment of that irritation, and by some to injections.

It has been advised by many, to procure a return of the running. Mr. Bromfield appears to have been the first who recommended a treatment suitable to this theory, which was to irritate the urethra to suppuration again, by introducing bougies. I cannot say that I have seen that benefit, that could have been wished, or that the first idea might make us expect, from this practice. Some have gone further, by recommending the introduction of venereal matter into the urethra; but this appears to be only conceit, and is founded upon a supposition, that such diseases arise only from venereal irritations; but I have already observed that they are produced by others.

It is generally a long time before the swelling of the testicle entirely subsides, although it does so more quickly at first than swellings of this part arising from other causes; but when the inflammation is removed, and the swelling only remains, evacuations never are of service. Before it becomes less, it generally becomes softer, commonly on the anterior surface; and this goes on till the whole becomes perhaps softer than natural, and then it diminishes.

It is still much longer before the epididymis comes to its natural state, and indeed it is often years before it returns to its natural size and

softness, and sometimes it never does: however, this is of no great consequence, as there is no inconvenience arising from a continuance of the hardness simply; though sometimes I am inclined to believe such testicles are rendered totally useless. I never had an opportunity of examining the testicle of one that I knew to have this complaint; but I have examined testicles where the epididymis had the same external feel, and the canal of the vas deferens was obliterated; but this I rather suspect is seldom the case; for there are people who have them both swelled, and notwithstanding have evacuations of the semen as before.

It is in this stage of the complaint that resolvents might be of service, such as mercurial friction joined with camphire. Fumigations with aromatic herbs, which may stimulate the absorbents to action in order to take up the superfluous matter. Electricity has been in some cases of singular service.

VI. OF THE DECREASE AND TERMINATION OF THE SYMPTOMS OF GONORRHOEA.

The decrease of the disease is generally known by an abatement of some or all of the abovementioned symptoms. The pain in the part becomes less, or terminates in an itching similar to the beginning of many gonorrhœas, and at last entirely goes off; the sense of weariness about the loins, hips, testicles, and scrotum, is no longer felt, and the transparent cherry-like appearance of the glans penis gradually vanishes; these are the best signs of an abatement of the diseased action.

The running becomes less, or if it does not diminish becomes first whiter, then of a paler colour, and gradually becomes more slimy and ropy in consistence, which has always been considered as the most certain sign of an approaching cure; and at last it entirely disappears. When the running becomes more slimy, it is then changed from matter to the natural fluid which lubricates the passage, and also to that fluid which appears to be preparatory to coition; but it is often very inconstant in its appearances, arising frequently from different modes of living, &c.

It very often happens that all the symptoms shall totally disappear, and the patients shall think themselves cured, and yet all the symptoms shall come upon them anew, but commonly milder, though in some cases they are as violent, as or even more violent than, at first; and this takes place sometimes at a considerable distance of time. I have known the symptoms return a month after every appearance of the disease had been removed; however in such cases they seldom last long. How far this second attack is to be looked upon as truly venereal, is not yet, I believe, ascertained: nothing can prove it absolutely, but the circumstance of giving it to a sound person. What may be the case with those in whom it has returned soon after the going off of the symptoms, I will not pretend to say; but I should very much suspect, that where it has continued well for a month, a return would not be venereal; but this is only conjecture, and if we were to reason upon it, we might easily reason ourselves into a belief that it was venereal; for if the parts can fall back again into one mode of action, that of inflammation and suppuration, there can be no reason why they should not fall back again into the specific mode of action; however, as the common effect of irritation is suppuration, and as the specific suppuration requires a peculiar irritation, it is easier to conceive that the parts should fall into the common mode of action, than into both. It is possible, however, that in such cases it is only the venereal action that is suspended, and thus becomes similar to what happens between the contamination and complete appearance of the disease.

In women, returns of the symptoms are more frequent than in men, particularly of the discharge; which being similar to the *fluor albus*, and frequently taken for that disease, gives less suspicion, although it is perhaps equally bad.

The distinction between a gonorrhœa and a gleet is not yet ascertained, for the inflammation subsiding, the pain going off, and the matter altering, are no proofs that the poison is destroyed; for it is no more necessary there should be a continuance of the inflammation to produce the specific poison, than it is necessary for a continuance of the inflammation to produce the gleet, as will appear evident from two cases before related.*

* Vide pages 40 and 41.

The first of these cases shows that the inflammation is not necessary to the existence of the venereal poison; and, on the contrary, the inflammation may exist after the matter discharged has ceased to be venereal; for I have known cases where the inflammation and discharge have continued for twelve months, and with considerable violence; and there has been a connection with women without a suspicion of giving them the disease; however this is not an absolute proof that there is no virus in the discharge.

CHAPTER VIII.

GENERAL OBSERVATIONS ON THE SYMPTOMS, WHICH OFTEN REMAIN AFTER THE DISEASE IS SUBDUED.

It often happens after the virus is destroyed, and the venereal inflammation removed, that some one, two, or more of the symptoms shall continue, and perhaps prove more obstinate than the original disease itself; some of them shall continue through life, and even new ones shall sometimes arise as soon as the first subside. All these symptoms are commonly imputed by the patients themselves, and what is still worse, either ignorantly or illiberally by some of the profession, to the original disease having been ill treated, or, as is vulgarly said, ill cured. But, certainly, so far as we are yet acquainted with the disease and method of cure, this is not true; for the methods of treatment, though numerous, may be said to be very similar, and we shall find these symptoms not to be consequences of any one mode of treatment, but that they happen indiscriminately after them all. Yet I can conceive that many constitutions, and particular parts, often require one mode of treatment in preference to another, and probably require modes that we are not yet acquainted with; but if these peculiarities of constitution or parts are not known, which must often be the case, the practitioner is not to be rashly accused of ignorance.

In the introduction I observed, that the venereal disease is capable of calling into action such susceptibilities as are remarkably strong, and peculiar to certain constitutions, and countries; and as the scrofula is predominant in this country, some of the effects of gonorrhœa may partake of a scrofulous nature.

The symptoms which continue after the virus is gone, do not owe their continuance to the specific qualities of the virus, but to its effects

upon the parts, such as inflammation and its consequences; for the same degree of inflammation arising from any other cause would leave most of the same effects. But I suspect, that, the continuance of the discharge called a gleet is an exception to this; for we find that it is often cured by the same mode of action which would produce the other symptoms, that is, inflammation; and we find in general that a discharge brought on by violence of no specific kind, does not last longer than the violence, even although the cause has been continued for some time, as is often the case during the use of bougies.

The first of the continued symptoms may be reckoned the remains of the disagreeable sensations excited by the original disease.

The second, the discharge called a gleet.

The third, the chordee.

The fourth, the irritable state of the bladder.

The fifth, the increase and hardness of the epididymis.

I. OF THE REMAINS OF THE DISAGREEABLE SENSATIONS EXCITED BY THE ORIGINAL DISEASE.

The strange kind of sensations, which continue in the urethra and glans, happen more frequently when the bladder has sympathised with the urethra in the time of the disease; for then there is often the remains of the old shooting pains in the glans, or on its surface, which take their rise from the bladder. These however commonly go off, seldom being the forerunners of any bad symptoms, and therefore are not to be considered as part of the disease, but merely a consequence; yet they are often very troublesome and teazing to the patient, keeping his mind always in doubt whether he is cured or not, which makes him frequently become the dupe of ignorant or designing men.

As these remaining sensations vary considerably in their nature, perhaps no one method of treatment will always be proper. I have known a bougie introduced a few times take off entirely the disagreeable sensation in the urethra, and I have known it do no good. Gentle irritating injections used occasionally will often alleviate in some degree those com-

plaints. A grain of corrosive sublimate to eight ounces of water makes a good injection for this purpose, but such applications are in general no more than palliatives.

I have known the use of hemlock relieve the symptoms very much, and in some cases entirely cure them, while in many others it has not had the least effect.

A blister applied to the perinæum will entirely cure some of the remaining symptoms, even when they extend towards the bladder, as will be explained hereafter; indeed it appears to have more effect than any other remedy. A blister to the small of the back will also give relief, but not so effectually as one applied to the perinæum.

The following cases are remarkable instances of this. A Portuguese gentleman about twenty-five years of age had contracted a venereal gonorrhœa, of which he was cured, but for two years after many of the symptoms still continued, and even with considerable violence. The symptoms were the following; a frequency in making water, and when the inclination came on he could not retain it a moment; a straining, and pain in the bladder after voiding it; a constant pain in the region of the bladder; a shooting pain in the urethra, which extended often to the anus; strange sensations in the perinæum; a sense of weariness in the testicles; and if he at any time pressed his thighs close together, it brought on the pain or sensation in the perinæum. It was supposed at Lisbon that he had the stone, and he came over to London for a cure of that disease. He was examined, but no stone was found. He was ordered to wash the external parts every morning with cold water, which he did for a fortnight, but found no benefit. I was consulted, and informed of all the above-mentioned circumstances. As a staff had been passed, there could be no stricture; however I thought it was possible there might be a diseased prostate gland, and therefore examined him by the anus; but found that gland of its natural size and firmness. As there was no visible alteration of structure any where to be found, I looked upon the disease as only a wrong action of the parts, and therefore ordered a blister to be applied to the perinæum, which relieved him almost immediately; it was only kept open for a few days, and the

whole of the symptoms were entirely removed. He retained his water as usual, all the strange sensations went off, and the blistered part was allowed to heal. About a fortnight after, he got a fresh venereal gonorrhœa, which alarmed him very much, as he was afraid it might bring back all his former symptoms, which however did not return, and he was soon cured of the gonorrhœa. He stayed in London some time after, without any relapse.

Another case, was that of a gentleman's servant in the country. He had, from a venereal cause, a disagreeable sensation whenever he made water, also a running, and some degree of chordee, and had laboured under these symptoms for a considerable time. He had undergone a course of mercury, which lasted two months, on a supposition of the venereal virus not being destroyed, but without effect. He had after that been bled, used powders of gum arabic and tragacanth, and taken calomel in small doses, with no better success. He then had recourse to injections and bougies of all kinds, but without receiving any benefit from them. On the ground of the symptoms not being venereal, but only wrong actions of the parts, a blister was applied upon the perinæum, repeated and kept open six days, when the symptoms totally disappeared, and had not recurred a twelvemonth after.

This practice is not only of service where there has been a preceding gonorrhœa, but I have found it remove almost immediately common stranguries, where the turpentines and opium, both by the mouth and anus, had proved ineffectual, and when the catheter had been necessarily introduced twice a day to draw off the water. But of this we shall speak more fully hereafter.

Electricity has been found to be of service in some cases, and therefore may be tried either in the first instance, or when other means have failed.

II. OF A GLEET.

Whatever method has been used in the cure of the venereal inflammation, whether injections, or internal medicines, mercurials, purgatives, or astringents, it often happens that the formation of pus shall continue, and prove more tedious and difficult of cure than the original disease. For as I have already observed, the venereal inflammation is of such a nature as to go off of itself, or to wear itself out; or, in other words, it is such an action of the living powers as can subsist only for a certain time. But this is not the case with a gleet, which seems to take its rise from a habit of action which the parts have contracted, and as they have no disposition to lay aside this action it of course is continued; for we find in those gonorrhœas which last long, or are tedious in their cure, that this habit is more rooted than in those which go off soon.

This disease however has not always the disposition to go on, for it often appears to stop of itself, even after every method has been ineffectually used. It is most probable that this arises from some accidental changes in the constitution, not at all depending upon the nature of the disease itself.

I have suspected that there was something of a scrofulous action in some gleets. We find frequently that a derangement of the natural actions of a part will be the cause of that part falling into some new diseased action, to which there may be a strong tendency in the constitution. We find that a cold falling on the eyes produces a scrofulous weakness in those parts, with a considerable discharge. There are often scrofulous swellings in the tonsils from the same cause.

This opinion of the nature of some gleets is strengthened by the methods of cure; for we find that the sea-bath cures more gleets than the common cold-bath, or any other mode of bathing. I have never yet tried the internal use of those medicines which are generally given in the scrofula; but I have found sea-water diluted, and used as an injection, cure some gleets, though it was not always effectual.

A gleet is generally understood to arise from a weakness; this certainly gives us no idea of the disease, and indeed there is none which can be annexed to the expression. By mechanical weakness is understood the not being able to perform some action, or sustain some force; by animal weakness, the same; but when the expression is applied to the animal's performing an uncommon, or an additional action, I do not perfectly understand it.

Upon this idea of weakness depended in a great measure the method of cure; but we shall find that the treatment founded on this idea is so far from answering in all cases, that it often does harm, and a contrary practice is successful.

A gleet differs from a gonorrhœa, first in this, that though a consequence of it, it is perfectly innocent with respect to infection. Secondly, when it is a true gleet it is generally different in some of the constituent parts of the discharge, which consists of globular bodies floating or wrapt in a slimy mucus instead of a serum. But the urethra is so circumstanced as easily to fall back into the formation of pus, and this commonly happens upon the least increase of exercise, eating or drinking indigestible food, or any thing, which increases the circulation or heats the patient. The virus however, I believe, does not return; but of this I am not certain, for there are cases that make it very doubtful, as was before observed.

I am inclined to suspect that a gleet arises from the surface of the urethra only, and not from the glands; for I have observed in several instances, that when the passage has just been cleared either by the discharge of urine, or by the use of an injection; a lascivious idea has caused the natural slime to flow very pure, which I do suppose would not have happened if the parts secreting the liquor had assisted in forming the gleet. A gentleman has a gleet occasionally attended with pain in making water, it is brought on by sitting in a post-chaise, if he sits on the cushion, but not if he sits on a hard seat; it never comes on after riding on horse-back, but he believes that riding upon a padded saddle would produce it.

A gleet is supposed to be an attendant upon what we call a relaxed

constitution; but I can hardly say that I have observed this to be the case; at least, I have seen instances, where I should have expected such a termination of a gonorrhœa if this had been a general cause, but did not find it so; and I have seen it in strong constitutions, at least in appearance, in every other respect. Gleets do not in all cases arise from preceding gonorrhœas, but sometimes from other diseases of the urethra. A stricture in the urethra is I believe almost always attended with a gleet: it sometimes arises also from a disease in the prostate gland.

When a gleet does not arise from any evident cause, nor can be supposed to be a return of a former gleet in consequence of a gonorrhœa, a stricture, or diseased prostate gland is to be suspected; and inquiry should be made into the circumstances of making water, whether the stream is smaller than common? whether there be any difficulty in voiding it? and whether the calls to make it are frequent? If there should be such symptoms, a bougie of a size rather less than the common, ought to be used, which will, if there is a stricture, stop when it reaches it; and if it passses on to the bladder with tolerable case, the disease is probably in the prostate gland, which should be next examined. But more fully of both these complaints hereafter.

CHAPTER IX.

OF THE CURE OF GLEETS.

As this discharge has no specific quality, but depends upon the constitution of the patient, or nature of the parts themselves, there can be no certain or fixed method of cure; and as it is very difficult to find out the true nature of different constitutions, or of parts, it becomes equally difficult to prescribe with certainty the medicines which will best suit this disease; for so great is the variety in constitutions, that what in one case proves a cure, will in another aggravate the complaint.

The cure would appear to depend upon a change being produced in the action of the parts, and that change may be produced in a great many ways, in different constitutions, each having a mode of action peculiar to itself, which I believe cannot be at first known.

Whatever method of cure is followed, it will probably be a continuation of that, which was put in practice towards the latter end of the cure of the gonorrhœa, and which was meant as a prevention of gleet. If such methods have not been already used, they may be tried now, and varied according to circumstances.

There are two ways of attempting the cure of this complaint, constitutional or local.

I. OF THE CONSTITUTIONAL METHOD OF CURE.

Medicines, when taken into the constitution with a view to the cure of gleet, may be supposed to act in three ways, as specific,* strengtheners, and astringents.

* It may be necessary to remark here, that by specific I do not mean a specific for the disease, but only such medicines as act specifically on those parts, as the turpentines, cantharides, &c.

The specific power of internal medicines upon those parts is not very great, however we find that some of them, such as the balsams, turpentines, canthariales, &c are of use, especially in slight cases. I think I have been able to ascertain this fact, that when the balsams, turpentines, or canthariales, are of service, they are almost immediately so; therefore if upon trial they are not found to lessen, or totally remove the gleet in five or six days, I have never continued them longer. And even where they have either lessened or totally removed the gleet in that time it will often recur upon leaving them off, and therefore they should be continued for some time after the symptoms have disappeared. I have known cases where the gleet has disappeared immediately upon taking the balsam capivi, and recurred upon leaving it off; and I have also seen where that medicine has kept it off for more than a month, and yet it has recurred immediately upon laying it aside, and stopped again as quickly, upon having recourse to it. In such cases the other methods of cure should be tried. The balsams may either be given alone, or mixed with other substances so as to make them less disagreeable.—I believe that the balsam of capaivi cures a gleet more permanently than injections, its action being specifically upon the parts.

The general strengtheners of the habit need only be given when the parts act merely as parts of that habit, and by disposing the whole to act properly, these parts are also disposed to act in the same way, such are the cold bath, sea-bathing, the bark, steel, &c.

Astringents taken into the constitution have no great powers, and if they had, they might be very improper, as any thing that could act with powers in the constitution equal to what would be necessary here, might very much affect many natural operations in the animal œconomy. The astringent gums, and salt of steel, are commonly given.

II. OF THE LOCAL METHOD OF CURE.

The second mode of cure is by local applications; these may be divided into four, which are, specifics, astringents, irritating medicines, and such as act by derivation.

The specifics applied locally, we may reasonably suppose will have greater effects than when given internally, because they may be applied stronger than can safely be thrown into the circulation; and I think I have had experience of this.

The astringents commonly used are, the decoction of the bark, white vitriol, alum, and preparations of lead. The aqua vitriolica cœrulea, of the London Dispensatory, diluted with eight times its quantity of water, makes a very good astringent injection. The same observations that I made on the specifics are applicable to the astringents; I believe that they act nearly in the same manner, and have the same effect. What their mode of action is I can hardly say.

When either of these methods have been used, and have had the desired effect, they should be continued for a considerable time after the symptoms have disappeared, and the time must be in proportion to the duration of the complaint, or the frequency of its returns. If it has been of long standing, we may be sure that the disposition for such a complaint is strong; and if it has returned frequently, upon the least increase of circulation, we may expect the same thing to happen again; therefore to correct the bad habits, it is necessary to continue the medicines for a considerable time.

Irritating applications are either injections or bougies, simple, or medicated with irritating medicines; violent exercise may be considered as having the same effect. Such applications should never be used till the other methods have been fully tried and found unsuccessful. They differ from the foregoing by producing at first a great discharge than the one they are intended to cure; and the increased discharge may or may not continue as long as the application is used. It becomes therefore necessary to inquire how long they are to be used to produce a cure of the gleet. That time will generally be in proportion to the violence used, and the nature of the parts which form the matter; and according to the disposition being strong or weak joined to its duration, and the greater or less irritability of the parts. If the parts are either weak or irritable, or both, an irritating injection should not be used; if strong, and not irritable, it may be used with safety. In this last case, if

it is an injection that stimulates very considerably, perhaps using it twice, or thrice, may be sufficient. I knew a gentleman who threw into the urethra, for a gleet of two years standing, Goulard's extract of lead undiluted, which produced a most violent inflammation, but when this inflammation went off, the gleet was cured. Two grains of corrosive sublimate to eight ounces of water is a very good irritating injection.

If it is a gleet of old standing it may require a week or more to remove it, even with an irritating injection; and if the injection is less irritating, so as to give but little pain, and increase the discharge in a small degree, it may require a fortnight. But one precaution is verynecessary respecting the use of irritating injections; it should be first known if possible, that they will do no harm. To know this may be difficult in many cases, but the nature of the parts is to be ascertained as nearly as possible, that is, whether they had ever been hurt before by such treatment; whether they were so susceptible of irritation, as that the irritation would run along the urethra and produce symptoms in the bladder; for in such cases I think irritating applications do not answer, but on the contrary, often produce worse disorders than those they were meant to cure.

Bougies may be classed with the irritating applications, and in many cases they act very violently as such They appear to be more efficacious than injections, but they require a longer time to produce their full effect. A simple, or unmedicated bougie, is in general sufficient for the cure of a gleet, and requires a month or six weeks application before the cure can be depended on. If they are made to stimulate otherwise than as extraneous bodies, then a shorter time will generally be sufficient; probably the best mode of medicating them, would be by mixing a little turpentine, or a little camphire with the composition, so as to act specifically on the parts; but great care should be taken not to irritate too much.

The size of the bougie should be smaller than the common, and need only be five or six inches long, as it seldom happens that a greater extent of the urethra has the disposition for gleet; although no harm will

arise from passing a bougie of the common length through the whole extent of the urethra.

In the cure of gleet attempted by means of the bougie, we have no certain rules to direct us when it should be left off; as the discharge will often continue as long as the bougie is used. If upon leaving off the bougie after having used it for several weeks, the running stops, then we may hope there is a cure performed; but if it should not be in the least diminished, it is more than probable that bougies will not effect a cure, and therefore it is hardly necessary to have recourse to them again; yet if the gleet is in part diminished, it will be right to begin again, and probably it may be proper to increase the irritating quality of the bougie to suit it to the diminished irritability of the parts.

The fourth mode of cure is by sympathy, or by producing an irritation in another part of the body, which shall destroy the mode of action in the urethra.

I knew a case of obstinate gleet attended with very disagreeable sensations in the urethra, especially at the time of making water, removed entirely by two chancres appearing upon the glans. The gentleman had taken all the medicines commonly recommended, and had applied the bougie, without effect.

A gentleman informed me that he had cured two persons of gleets, by applying a blister to the underside of the urethra, and I have known several gleets of old standing, after having baffled all common attempts, cured by electricity. All these different methods of cure alter the disposition of the part.

In whatever way the cure is attempted, rest or quietness in most cases is of great consequence; for as I have observed, exercise is often a cause, not only of its continuance, but of its increase and return. But this idea is not to be too rigidly adhered to, especially in cases which have been treated unsuccessfully; as I have known some that have got immediately well by riding on horseback after long disuse of that exercise.

Regularity and moderation in eating and drinking should be particularly attended to, for irregularities of this kind either hinder the cure or bring on a return of the disease.

Connection with women often causes a return, or increase of gleet, and in such cases it gives suspicion of a fresh infection; but I believe the difference between this, and a fresh infection is, that the return will follow the connection so close, as to be almost immediate, and that circumstance joined with the other symptoms will in general ascertain the nature of the discharge.

III. OF GLEETS IN WOMEN.

This disease is more frequent in women than men, at least a discharge from the vagina is very common in them, which probably will be called a gleet, when following a venereal taint, although only the *fluor albus*.

The cure of the gleet in women is nearly the same as in men, except in the use of what I have called specifics to the parts; for as the gleet in women is principally from the vagina, I believe that this part is not more affected by the turpentines than other parts are. Neither can we use the bougie in cases of gleet in the vagina; and, when the gleet is only from the urethra, I imagine it is hardly ever attended to in women.

IV. OF THE REMAINING CHORDEE.

This symptom, I have already observed, often remains after every mark of the true virus is removed, and may or may not be an attendant on on any of the other continuing symptoms,

Rubbing the part externally with mercurial ointment may be of service, and if joined with camphire, its powers will be encreased. I have known electricity cure a chordee of long standing. If it is the spasmodic chordee that remains, bark should be given.

V. OF THE CONTINUANCE OF THE IRRITATION OF THE BLADDER.

The irritation of the bladder sometimes continues after every other symptom is gone, and it may be an attendant upon all, or any of the other continuing symptoms; it seldom lasts with the same violence, although it is often very troublesome. When this irritation is kept up with the same violence, the bladder itself may be suspected of being diseased; or it may arise from its connection with other parts, such as the urethra, or prostate gland; for a stricture in the urethra coming on will continue it, and a disease in the prostate gland will do the same.

Neither of these diseases will probably follow the gonorrhœa so closely as to continue this irritation, though perhaps they may have been taking place prior to the gonorrhœa, and so contribute to its increase, and continuance; which may probably be ascertained by a history of the patient preceding the present complaint; however, before the bladder itself is attempted to be cured, a bougie should be passed, and if no stricture is found, then the prostate gland should be examined, as shall be described.

When the disease is in the bladder only, I think the pain is principally at the close of making water, and for a little while after. The cure of this symptom consists in opiate clysters, cicuta, bark, sea-bathing, and I should be inclined to recommend the application of a blister to the perineum in men. How far opiate clysters can affect the bladder in women, as they do in men, I am not certain,

VI. OF THE REMAINING HARDNESS OF THE EPIDIDYMIS.

This symptom I have observed remains long after every other symptom is removed, and may continue even for life, but seldom or ever any bad consequences happen from it, if the vas deferens is not rendered impervious; and not even then if it is only in one testicle, the other being equal to all the purposes of generation. As this is the case, we must at

once see, that no certain method of resolution is yet known. Sitting over the steam of warm water with camphire, might be tried, especially in such cases as are not disposed to be permanent, and rubbing the scrotum with mercurial ointment joined with camphire. But in most cases this practice will prove too tedious, or rather too inefficacious to be long persisted in.

PART III.

CHAPTER I.

OF DISEASES SUPPOSED TO ARISE IN CONSEQUENCE OF VENEREAL INFLAMMATION IN THE URETHRA OF MEN.

Gonorrhoea either produces, or is supposed to produce, many disorders besides those already mentioned, and which are totally different from the original disease. How far they do all, or any of them, arise in consequence of this disease, is not clear; but as they are diseases of the urethra, and are both numerous and important, I mean to treat fully of them in this place. If any of these diseases arise from gonorrhœa, they are most probably not the consequences of any specific quality in the venereal poison, but are such as might be produced by any common inflammation in those parts, as was observed of the *continued symptoms*.

In this investigation we shall find some of the complaints arising out of each other, so that there is frequently a series of them. Thus a stricture of the urethra produces an irritable bladder, a frequent desire to make water, increased strength of the bladder, a dilatation of the urethra between the bladder and stricture, ulceration, fistula in perinæo, dilatation of the ureters and enlargement of the pelvis of the kidneys, besides other complaints that are sympathetic, such as swellings of the testicle, and of the glands in the groin.

I shall treat of the diseases of those parts in the order in which they most commonly arise. It may be observed that most of these diseases, especially the diminution of distensibility in the bladder, attack men advanced beyond middle age, although many if not all of them are at times found in younger men, and the circumstance of their appearing at this period, arises probably in some degree from a long habit of an

unnatural mode of life producing many diseases, such as gout; for certainly such complaints do not so frequently take place among the more uncivilized nations.

The most frequent disease in the urethra is an obstruction to the passage of the urine; it happens both in young and old, although most frequently in the latter. Before I begin to treat of this subject, I shall, for the better understanding of the whole, make some observations on the uses of this passage in its natural state.

It may first be observed, that the urethra in man is employed for two purposes, and on this occasion I may be allowed to make the following general remark, that nature has not been able to apply any one part to two purposes with advantage, as might be illustrated in many instances in different animals. The animals whose legs are adapted both for swimming, and walking, are not good at either, as seals, otters, ducks, and geese; the animals also whose legs are intended both for walking and flying, are but badly formed for either, as the bat; the same observations are applicable to fish, for the flying fish neither swims, nor flies well; and whenever parts intended for such double functions are diseased, both orders of functions are performed imperfectly. This is immediately applicable to the urethra, for it is intended for two purposes, as a canal or passage, both for the urine, and the semen. The urine requires the simplest of all canals, and of no greater length than the distance from the bladder to the external surface, as we find the urethra in women, birds, the amphibia, and fish; but the passage for the semen in the quadruped required to be a complicated canal, and of a length capable of conveying the semen to the female, provided with many additional and necessary parts, as the *corpus spongiosum urethræ*, *musculi acceleratores*, *Cowper's glands*, *prostate gland*, and *vesiculæ seminales*. As all these parts are superadded for the purposes of generation, and as the diseases of this canal are principally seated in them, we must at once see how much the urinary organs must suffer from a connection with parts so numerous, and so liable to disease; and what adds to the evil is, that the actions of the urinary organs are constant, and absolutely necessary for the well-being of the machine; whereas the evacuation of the semen takes place

only during a certain portion of life, is then only occasional, and never essentially necessary to the existence of the individual. The force of this observation is at once seen by making the comparison between the inconveniences that attend the expulsion of the urine in the male, and in the female.

The canal of the urethra is liable to such diseases as are capable of preventing in some degree the passage of the urine through it; and in some of these diseases the passage at last becomes completely obstructed. In all cases there is a diminution of the size of the canal, but in different ways. There are five modes of obstruction, four of which are diseases of the passage itself, the fifth is a consequence of the diseases of other parts. Three of the former are a lessening of the diameter of the passage; the fourth an excrescence in the passage; the fifth arises from the sides being compressed, which may be done either by exterior contiguous swellings, or by a swelling of the prostate gland.*

I. OF STRICTURES.

The three first I shall now consider, of which the first is the true permanent stricture arising from an alteration in the structure of part of the urethra. The second is a mixed case, composed of a permanent stricture and spasm. The third is the true spasmodic stricture. Most obstructions to the passage of the urine, if not all, are attended with nearly the same symptoms, so that there are hardly sufficient marks for distinguishing the different causes. Few take notice of the first symptoms of a stricture till they have either become violent, or have been the cause of other inconveniences: for instance, a patient shall have a considerable stricture without observing that he does not make water freely; he shall even have in consequence of a stricture, a tendency to inflammation, and suppuration in the perinæum, and not feel any obstruction to the pas-

* Many other kinds of obstruction are described by authors, none of which I have ever seen; and as probably I have opened more urethras after death, where there was an obstruction of the passage, than all the authors who have written on this subject, I am inclined to believe that they wrote from imagination only.

sage of his urine, nor suspect that he has any other complaint but the inflammation in the perinæum. In all of these obstructions the stream of water becomes small, and that in proportion to the obstruction; but this symptom, though probably it is the first, is not always observed by the patient. In some, the water is voided only in drops, and then it cannot escape notice; in others the stream of urine is forked, or scattered: under such circumstances the passage should be examined with a bougie; and, if one of a common size passes with tolerable ease, the fifth cause of obstruction is to be suspected, which will most probably be found to be a swelled prostate gland; for any other cause that can produce a compression of the sides of the urethra, sufficient to obstruct the urine, will be known to the patient, such as a tumor forming any where along the canal, or an inflammation along its sides; therefore if neither of these are known to exist, the prostate gland should be examined, as will be described hereafter.

The spasmodic obstruction will commonly explain itself when the symptoms are well investigated; for the obstruction arising from this cause will not be permanent. These obstructions, but more particularly that from a permanent stricture, is generally attended with a discharge of matter or a gleet. This is often considered by the patient as the whole disease, and he applies to the surgeon for the cure of a gleet. The surgeon often goes on attempting the cure of this disease; but not succeeding, at last other symptoms are observed, and a stricture is suspected either by the surgeon or patient. In diseases of this passage, and also of the prostate gland and bladder, there is commonly an uneasiness about the perinæum, anus, and lower part of the abdomen, and the person can hardly cross his legs without pain.

CHAPTER II.

OF THE PERMANENT STRICTURE.

In the permanent stricture* the patient seldom complains till he can hardly get the water to pass; and frequently has a considerable degree of strangury, and even other symptoms, that happen in stone and gravel, which are therefore too frequently supposed to be the causes of the complaint. The disease generally occupies no great length of the passage; at least in most of the cases, that I have seen, it extended no further in breadth than if the part had been surrounded with a piece of packthread; and in many it had a good deal of that appearance. I have however seen the urethra irregularly contracted for above an inch in length, owing to its coats, or internal membrane, being irregularly thickened, and forming a winding canal.

A stricture does not arise in all cases from an equal contraction of the urethra all round, but in some from a contraction of one side, which probably has given the idea of its having arisen from an ulcer on that side. This contraction of one side only, throws the passage to the opposite side, which often renders it difficult to pass the bougie. The contracted part is whiter than any other part of the urethra, and is harder in its consistence. In some few cases there are more strictures than one. I have seen half a dozen in one urethra; some of which were more contracted than others; and indeed many urethras that have a stricture have small tightnesses in other parts of them; this we learn from successive resistance felt in passing the bougie.

Every part of the urethra is not equally subject to strictures, for there appears to be one part which is much more liable to them than the whole of the urethra besides, that is about the bulbous part. We find

* Vide plate I. fig. 1.

them however sometimes on this side of the bulb, but very seldom beyond it. I never saw a stricture in that part of the urethra which passes through the prostate gland; and the bulb, besides being the most frequent seat of this disease, has likewise the strictures formed there of the worst kind. They are generally slow in forming, it being often years from their being perceived before they become very troublesome.

The same stricture is not at all times equally bad; for we find that in warm weather it is not nearly so troublesome as in cold: these changes are often very quick: a cold day, even an hour of cold weather, shall produce a change in them; and the same stricture is almost always worse in winter than in summer; however, this observation is not free from exceptions. I knew one case that was always worse in the summer. There are other circumstances besides cold that make a stricture worse; a gentleman who had an ague, always found the stricture increased during the fit; it is also increased by drinking, violent exercise, and by the retention of urine after an inclination to void it. This last cause is often so great as to produce a total stoppage for a time. It is sometimes rendered much worse by a small calculus passing from the bladder, of the formation of which this stricture was probably the cause. The calculus not being able to pass will produce a total stoppage of urine, the cause of which can hardly be known at the time; and if known it could not be remedied without an operation.*

It is impossible to say what is the cause of that alteration in the structure of the urethra which diminishes the canal: it has been ascribed to the effects of the venereal disease, and often to the method of cure; but I doubt very much if it commonly, or even ever, arises from these causes; yet as most men have had venereal complaints some time or other, it is natural to ascribe the stricture to them: and therefore it may be very difficult to refute this opinion. Many reasons however can be given why we should suppose that it is not commonly a consequence of a venereal inflammation. Strictures are common to most passages in the human body; they are often to be found in the œsophagus; in the intestines,

* Vide plate IV.

especially the rectum; in the anus; in the prepuce, producing phymosis; in the lachrymal duct. producing the disease called fistula lachrymalis, where no disease had previously existed. They sometimes happen in the urethra where no venereal complaint had ever been; I have seen an instance of this kind in a young man of nineteen who had had the complaint for eight years, and which therefore began when only eleven years of age. It was treated at first as stone, or gravel. He was of a scrofulous habit, the lips thick, the eyes sore, a thickened cornea of one eye, and of a weak habit. This stricture was in the usual place, about the membranous part of the urethra. I have seen an instance of a stricture in the urethra of a boy of four years, and a fistula in perinæo in consequence of it. They are as common to those who have had the gonorrhœa slight, as those who have it violently.

I knew a young gentleman who had a very bad stricture; he had had several gonorrhœas, but they were so slight that they seldom lasted a week; nor in any of them did the pain extend beyond the frænum, but the stricture was about the membranous part; cases of this kind occur every day. They are never found to come on during the venereal inflammation, nor for some time after the infection is gone. There have been thirty, and sometimes forty, years between the cure of a gonorrhœa and the beginning of a stricture, the health being all that time perfectly good. If they arose in consequence of the venereal inflammation we might expect to find them of some extent, because the venereal inflammation extends some way; and we should also expect to find them most frequent in that part of the urethra, which is most commonly the seat of the venereal disease; but I remarked before, that they are not so frequent there, as they are in other parts of the urethra.

It is supposed by many that strictures arise from the use of injections in the cure of gonorrhœa, but this opinion appears to be founded in prejudice; for I have seen as many strictures after gonorrhœas that have been cured without injections, as after those cured with them.

These modes of accounting for strictures give no explanation of those, where there has been no previous gonorrhœa, or where the gonorrhœa has not been cured by injections; and indeed if we consider the mode

of cure of strictures, we must see that an injection is a mild application to the urethra, compared to a bougie; yet a bougie has never been supposed, or known to be the cause of a stricture. Further, some have injected by mistake very irritating liquors, such as the undiluted extract of lead, and caustic alkali, without giving the least tendency towards a stricture, although they produced violent inflammation, and even sloughing of the internal membrane of the urethra.

By many they have been supposed to have arisen from the healing of ulcers in the urethra; but as I never saw an ulcer in these parts, except in consequence of a stricture, and as I do not believe there ever is an ulcer in the case of a common gonorrhœa, I can hardly attribute them to that cause.

I. OF THE BOUGIE.

The bougie, with its application, is perhaps one of the greatest improvements in surgery which these last thirty or forty years have produced. When I compare the practice of the present day with what it was in the year 1750, it hardly appears to be the same disease we are treating. I remember about that time when I attended the first hospitals in this city, the common bougies were either a piece of lead* or a small wax candle; and although the present bougie was known at that time, yet a due preference was not given, or its particular merit understood, as we may see from the publications of that time.

Daran was the first who improved the bougie and brought it into general use. He wrote professedly on the diseases, for which it is a cure, and also of the manner of preparing it; but he has introduced so much absurdity in his descriptions of the diseases, the modes of treatment, and of the powers and composition of his bougies, as to create disgust; yet this absurdity has been much more effectual in introducing the bougie

* When lead was used in place of bougies, it has happened that a piece of the end has broken off in the bladder, which has been dissolved by throwing quicksilver into that viscus. I suspected that quicksilver could not come in contact with lead while in water so as to dissolve it, but upon making the experiment I found it did.

into universal use, than all the real knowledge of that time directed by good sense could have been. Such extravagant recommendations of particular remedies are not at all times without their use. Inoculation would have still been practised with caution, if it had not been for the enthusiasm of the Suttons. Preparations of lead would not have been so universally applied if they had not been recommended by Goulard in the most extravagant terms; nor would the hemlock have come into such general use if its true merits only had been held forth. Improvements are often over rated, but they come to their true value at last: Sutton has told us, that the cold regimen in extreme is infinitely better than the old method; but from general practice we have learned that moderation is best, which is all we yet know.

When Daran published his observations on the bougie, every surgeon set to work to discover the composition, and each conceived that he had found it out from the bougies he had made producing the effects described by Daran. It never occurred to them that any extraneous body of the same shape and consistence would do the same thing.

II. OF THE TREATMENT OF THE PERMANENT STRICTURE.

The cure of the permanent stricture is, I believe, to be accomplished only by local applications; mercury has been given upon the erroneous supposition of its being venereal, but without success. The cure is either a dilatation of the contracted part, or a destruction of it by ulceration, or escharotics The dilatation is performed by the bougie, and seldom or never affords more than a temporary cure; for although the passage may be dilated sufficiently for the urine to pass, yet there is always the original tendency for contraction, which generally recurs sooner or later.* The ulcerative process is also effected by a bougie, and the destruction by

* In cases of stricture when a patient applies for relief, it may often be proper to inquire into the history of the case, previous to the passing of a bougie; especially to enquire if he ever used bougies before; if he has, then to enquire into the result; if they passed readily, or if they did not pass the stricture at all: if the first, then nothing further need be asked, but if the last, then enquire if he or his surgeon observed that they were gaining ground with the bougie, viz. if the bougie went further in, before they left it off than at first; if so,

escharotics, is by means of caustics, as the lunar caustic. It often happens in strictures that the passage is so diminished as hardly to allow any water to pass, producing often a total stoppage; nor will a bougie immediately pass, and if it can be made to pass, yet no water follows it when withdrawn. In such cases therefore we must have recourse to temporary relief; such as the warm-bath, which counteracts the effects of cold, and quiets any spasms that may have taken place in the parts, and clysters with opium, which have still more effect. Producing an evacuation by stool, often lessens the spasm, for a spasmodic suppression of urine often arises from a constipation, even where there is no stricture.

Probably a blister to the perinæum will be of singular service, if there be time for its operation.

The cure by dilatation is I imagine principally mechanical when performed by bougies, whose powers are in general like those of a wedge; however their ultimate effect is not always so simple, as that of a wedge upon inanimate matter; for pressure produces action of the animal powers, either to adapt the parts to their new position, or to recede by ulceration, which gives us two very different effects of a bougie, and of course two different intentions in applying them; one to produce dilatation, the other ulceration, which last is not always so readily effected.

It generally happens, as has been already observed, that the disease has gone considerable lengths before application has been made for a cure, and therefore the stricture has become considerable, in so much that it is often with great difficulty that a small bougie can be made to pass. If the case is such as will readily admit the end of a small bougie to pass, let it be ever so small, the cure is then in our power; it often happens however, that the stricture is such, as will resist the passing of a small bougie at first, and even after repeated trials. Yet it is necessary to persevere with the small bougie, for sometimes it happens that the

then to ask him how far. If they have visibly gained ground without getting through the stricture, I am afraid that the use of the bougie must not be pursued, because it is most probable that a new passage has been formed, which makes the passing of the bougie into the stricture impossible

passage through the stricture is not in a line with the urethra itself, which of course obstructs the bougie; such strictures I suspect are not equally placed all round so as to throw the small passage remaining into the centre of the canal.

In many cases where the stricture is very considerable, we are often teazed with occasional spasms, which will either refuse the bougie altogether, or only let a very small one pass; though at another time they will admit one larger: in such cases I have been able to get the point of the bougie sometimes to enter, by rubbing the perinæum externally with the finger of one hand while I pushed the bougie on with the other. This, though it does not always succeed, yet is worth trying. Whether it alters the position of the stricture so as to give entrance to the point of the bougie, or by sympathy removes the spasm, I will not absolutely determine, but I believe it rather acts by sympathy.

In such cases of spasm in the stricture, I have often succeeded by letting the bougie remain a little while close to the stricture, and then pushing it on; this mode so often succeeds that it should always be attempted when the bougie does not pass, or only passes occasionally, which will be mentioned more fully when on the spasmodic stricture.

Dipping the glans penis into cold water might probably take off the spasm, as it does sometimes in common strangury, but this cannot be so easily done while a bougie is in the passage.

In cases of a permanent stricture, though the bougie does not at first pass, yet upon repeated trials it will every now and then find its way, which helps to render a future trial more certain and easy. Yet, it too often happens, that the future success does not immediately depend upon passing the bougie once or twice, for it shall pass to-day and not to-morrow; and this uncertainty shall last for weeks, notwithstanding every trial we can make; I may however observe, that in general its introduction becomes gradually less difficult, and therefore in no case should we despair of success.

It is imagined by some that the best time for trial in these cases is just after making water, as the passage is supposed to be clear and more in a straight line; but this is not confirmed by practice.

It is not an easy matter in cases where the passage is very small, to tell whether the bougie has entered the stricture or not ; for such slender bougies as must generally be used at first, bend so very easily that the introducer is apt to think it is passing while it is only bending. A surgeon however should generally first make himself acquainted with the situation of the stricture, by a common sized bougie, and when that is known he should try a smaller one, and when he comes to the stricture push gently, and for a little time only. If he has pressed so as to make the bougie pass further into the penis, he will know how far it has entered the stricture by taking off the pressure from the bougie; for if it recoil he may be sure that it has not passed, at least has not passed far, but only bent, for the natural elasticity of the bougie, and the direction of the passage having been altered by it, will force it back again. But if it remain fixed, and do not recoil, he may be sure that it has entered the stricture; in using a very small bougie however, these observations do not so well apply, for it may be bending, or bent, without being perceptible. It often happens that a bougie will enter only a little way, perhaps not more than one-tenth of an inch, and then bend if the pressure be continued. To know whether this be the case it is necessary to withdraw the bougie and examine its end; if the end be blunted we may be sure the bougie has not entered in the least, but if it be flattened for an eighth or tenth of an inch, or grooved, or have its outer waxy coat pushed up for that length, or if there be a circular impression made upon the bougie where the stricture is, or only a dent on one side, both of which last I suspect arise from spasm at the time, we may then be sure that it has passed as far as these appearances extend. It becomes then necessary to introduce another exactly of the same size and in the same manner, and to let it remain as long as the patient can bear it, or convenience will allow; and by repeating this the stricture will be overcome. Sometimes we can judge of its having entered the stricture, by pulling it gently out; for if it stick a little at the first pull, we may be certain it has entered; but the appearance of the bougie itself will give the best information.* In such cases I have always directed

* It may be remarked, that there are some lacunæ (Vide plate I. fig. 2) near, and also a

my patient to preserve the bougie for my inspection, exactly in the same form in which it was when it was withdrawn; but when it passes with ease this nicety is not necessary.

The time, that each bougie should remain in the passage must be determined by the feelings of the patient, for it should never give pain if possible. Going beyond this point is destroying the intention, increasing the very symptoms that are meant to be relieved, and producing irritation, which for a time renders the further application of the bougie improper. While the bougie is passing, if the patient feel very acutely, it should not be left in above five or ten minutes, or not so long if it give great pain; and each time of application should be lengthened so gradually, as to be insensible to the feelings of the mind, and the irritability of the parts. I have known it days, nay in many patients weeks, before they could allow the bougie to remain in the passage five or ten minutes, and yet in time they have been able to bear it for hours, and at last without any difficulty. The best time to let a bougie remain in the passage is when the patient has least to do; or in the morning while he is in bed, provided he can pass it himself.

The bougie should be increased in size according to the facility, with which the stricture dilates, and the ease, with which the patient bears the dilatation. If the parts are very firm, or very irritable, the increase of the size of the bougie should be slow, gradually stealing upon the parts, and allowing them to adapt their structure to the increased size. But, if the sensibility of the parts will allow, the increase of the size of the bougie may be somewhat quicker, though never more quick than

little way beyond the glans penis, which often stop the bougie, and give at first the idea of a stricture. I have known them taken for such; and when the bougie stops so near to the glans this is to be suspected, and therefore the direction of the point of the bougie should be varied, bearing it against the under side of the urethra. When the bougie stops in one of those lacunæ I think that the patient appears to have more pain than from a real stricture. The valvular part of the prostate gland formed by disease (Vide plate V.) very often obstructs the bougie, and is taken for a stricture by those who are not well acquainted with the different obstructions in this canal; and by those who are, it is a means of discovering disease in this part; and indeed, in a natural state of parts, I think I can tell when I come to this part with a bougie.

the patient can bear with ease; the increase should be continued till the largest sized bougie passes freely; nor should this be laid aside till after three weeks, or a month, in order to habituate the dilated part to its new position, or to take off the habit of contracting from the part as much as possible; but, as was observed before, the permanency of this cure can seldom be depended upon.

Instead of proceeding with the caution recommended, it has been practised with success for a time, to force a common sized bougie through a stricture, that only allowed a small one to pass. This, I suppose, either tore the stricture, or weakened it by stretching it suddenly, so as to render it unable to recover its contractile power for a considerable time after. I have seen where this has produced good effects, and for a time removed the permanent stricture, and prevented spasm from taking place. This is a practice, however, which I have never tried; always preferring the mild treatment where I could pass a bougie.

I have known the passing of the bougie remove almost immediately a swelling of the testicle which had arisen from the stricture; therefore such a symptom should not prevent the use of the bougie.

In cases of strictures, where the bougie is used, the patient is commonly in other respects well, and is with difficulty persuaded to restrain from his common habits, often making too free in eating, drinking, and exercise; which are all in many cases pernicious, more especially where inflammation and suppuration have taken place. It is therefore the duty of the surgeon to restrict the patient for some time within certain bounds, till he finds by trials what the parts are capable of bearing without producing inflammation.

III. OF THE CURE OF STRICTURE BY ULCERATION.

The cure of a stricture by means of ulceration is likewise effected by a bougie; this method may be employed both in cases where a bougie will pass, and where it will not. In the first case there is not the same necessity for ulceration as in the second, because where a bougie will pass there is no immediate danger arising from the stricture, which

may therefore be dilated, as already described. But in case this method should be preferred to a slow dilatation, which allows the parts time to adapt themselves to their new position, the stricture may be destroyed by producing ulceration in the parts, especially if they are not irritable, so as to admit of considerable violence.

When this is intended, the bougie should be introduced as far into the stricture as possible, and the size of it increased as fast as the sensations of the patient can well bear. This will produce ulceration in the part pressed, which is a more lasting cure, because more of the stricture is destroyed than when the parts are simply dilated. I believe however there are few patients that will submit to this practice; and indeed few will be able to bear it; for I have seen it bring on violent spasms on the part, which produced suppression of urine, and proved very troublesome. Therefore as there is no absolute necessity in such cases for pursuing this method, I do not recommend it as a general practice, although there are cases where it succeeds; and where this method is to be practised, it might probably not be amiss to accustom the passage to a bougie for some time before such violence is used.

If the smallest bougie, which can possibly be made with some degree of strength, cannot pass, dilatation becomes impracticable, and it is necessary that something else should be done for the relief of the patient; and the destruction of the stricture is to be effected some way or other. In many cases it may be proper to attempt this by ulceration of the part; for we find from experience, that a stricture may be removed by the simple pressure of a bougie. This effect must arise from the irritation of absorption being given to the diseased part, which, from the stricture not being an originally formed part, nor having any power of resistance equal to the original one, is more susceptible of ulceration, and thereby is absorbed. The bougies which are only to produce ulceration in consequence of their being applied to the stricture, need not be so small as in the former cases, as they are not intended to pass; and by being of a common size they will also be more certain in their application to the stricture. The force applied to a bougie in this case should not be great, for a stricture is the hardest part of the urethra; and if a

bougie is applied with a considerable degree of pressure, and continued there, it sometimes happens that the end of the bougie slips off the stricture before there is time for ulceration, and makes its way into the substance of the corpus spongiosum by the side of the stricture; and if the pressure be continued still longer, it will make a new passage beyond the stricture in the corpus spongiosum urethræ.* This more readily happens if the stricture be in the bend of the canal, as in such cases the bougie can hardly be applied exactly to it, not having the same curve; such mischief I have seen more than once; and sometimes the bougie has been pushed so far as to make its way into the rectum.

It often requires a considerable time before the whole is so far ulcerated as to admit the bougie, and this tires the patient, and almost makes him despair of a cure. In this process great attention should be paid to the seeming progress of the cure; for if it appears to the surgeon that he is gaining ground by the bougie passing farther in, and yet the patient does not make water better in the least, then he may be sure that he is forcing a new passage.†

When the stricture is so far got the better of by these means as to admit a small bougie, the dilatation is to be made as in the former case where a bougie passed at first. Whenever a bougie of a tolerable size passes with ease, and the parts and patient have become accustomed to them, it is no longer necessary that the surgeon should continue to pass them; the patient may be allowed to introduce them himself; and when he can do it readily, it may be trusted to him in common, as he can make use of them at the most convenient times, by which means they may be in general longer and oftener applied, the surgeon only seeing him occasionally. This practice of the patient under a surgeon's eye, by which he is taught how to pass them, becomes more necessary, as strictures are diseases that commonly recur, therefore no man who has ever had a stricture, and is cured of it, should rely on the cure as

* Vide plate II.

† This makes it necessary in all cases of strictures, where bougies will not pass, to be very particular in our inquiries, whether the patient has used bougies formerly, and whether there may not be reason to believe that they had taken a wrong direction.

lasting, but should be always prepared for a return; and should always have some bougies by him. He should not go a journey even of a week without them; and the number should be according to the time he is to be gone, or the place he is going to; for in many parts of the world he cannot be supplied with them. The bougies for such purpose should be of different sizes, as it is uncertain in what degree the disease may return.

Bougies, in all cases, from their shape, and from the action of the parts, readily slip out, which retards the cure; but it is much worse when they pass into the bladder; which can only take place in cases where the stricture is in some measure overcome. The consequence of a bougie passing into the bladder must at once appear in its fullest force to every one; it subjects the patient in most cases to be cut as for the stone; and indeed if it is either not soon thrown out, or cut out, it becomes the basis of a stone. A young man was cut for a bougie only a fortnight after it had passed into the bladder; and it was almost wholly crusted over with calculous matter. Bougies have been known to be forced out of the bladder along with the water by the action of that viscus, and in several folds. It is probable that the bladder in a natural state has not power sufficient to perform such an action; but we shall show that in cases of strictures, where the resistance to the passing of the water is very much increased, the strength of the bladder becomes proportionably greater; this happens principally in cases of strictures of long standing.

Such accidents are often observed before the outer end of the bougie has got beyond the projecting part of the penis, but even then it is difficult of extraction. I have succeeded in some of these cases by fixing the bougie in the urethra some way below its end; for instance, in the perinæum, by pressing against it with one hand, and pushing back the penis upon the bougie with the other hand; then laying hold of the penis upon the bougie, removing the pressure below, and drawing the whole up; and by performing these two motions alternately, I have been able to lay hold of the end of it However, this does not always succeed, for when the bougie is either small, or becomes soft, it will not

admit of the penis being pushed down upon it without bending; or if the thick end of the bougie has got beyond the moveable, or projecting part of the penis, then this mode of treatment becomes impracticable. I have succeeded in these last cases with the forceps for extracting the stone out of the urethra; but if it has got into the bend of the urethra, this practice will also fail, and in such a state it would be most adviseable to pass a catheter down to it, and cut upon that; and probably the above mentioned forceps introduced through the wound might then lay hold of its end; or by cutting a little further, so as to expose some part of the bougie, it might be easily extracted, without the necessity of cutting into the bladder; this part of the operation, however, would be very difficult in a fat or lusty man.

To prevent the inconvenience of the bougie coming out, or the mischief of its passing in, it is necessary to tie a soft cotton thread round that end of the bougie which is out of the urethra, and then round the root of the glans; this last part should be very loose, for an obvious reason; and the projecting part of the bougie should also be bent down upon the penis, which makes it both less troublesome, and more secure.

IV. OF THE APPLICATION OF CAUSTIC TO STRICTURES.

When a bougie can readily pass there is no necessity for using any other method to remove the stricture; but there are too many cases, where a bougie cannot be made to pass, or so seldom that it cannot be depended upon for a cure. This may arise from several causes. First, the stricture may be so tight as not to allow the smallest bougie to pass. Secondly, the orifice in the stricture may not be in a line with the urethra, which will make it uncertain, if not impossible, to pass a bougie. Thirdly, there may be no passage at all, it having been obliterated by disease, and the urine passed by *fistulæ in perinæo*.

The first very rarely occurs, for if the passage in the stricture be in a line with the general canal, a small bougie will commonly pass, and although it may not readily do so upon every trial, it will be sufficient to make way for another bougie, which is all that is wanted.

The second case, where the canal is not in a line with the common passage, may arise from three causes. First, when the stricture is in the bend of the urethra, although the passage through it may be in the centre of the canal, yet as the bougie cannot have the exact curve, it will be very uncertain in its application. Secondly, from an irregularity in the formation of the stricture, which may throw the passage to one side, even in the straight part of the urethra; and Thirdly, from ulceration having taken place, producing *fistulæ in perinæo*, which often make the canal irregular in its course.

The third case, where the application of the caustic may be necessary, is where there is no passage at all, which happens from ulceration and abscesses in the perinæum opening externally; and in the healing of them the passage is often closed up entirely. In all the above-mentioned cases I have succeeded with the caustic beyond expectation.

If the obstructions are any where between the membranous part of the urethra and the glans, where the canal is nearly straight, or can easily be made so by the introduction of a slight instrument, it becomes an easy matter to destroy them by caustic; but if beyond that, it becomes then more difficult: however, at the beginning of the bend of the urethra, the obstruction may be so far got the better of as to admit of the passing of a bougie, or at least to procure a tolerable free passage for the urine. I have seen several cases where it was thought necessary to follow this practice, and it succeeded so well, that after a few touches with the caustic the bougie could be passed, which is all that is wanted. The success in these cases was such as would incline me to have recourse to this practice very early; indeed, whenever I could not pass a small bougie through the stricture; and I look upon the caustic as a much safer method than using pressure with a bougie, for the reason beforementioned, that is, the danger of making a new passage, without destroying in the least any part of the obstruction.

Most of the strictures I ever examined after death, appeared to be in the power of such treatment; however, I have seen one or two cases, where the contraction was of some length, and irregular, which would have puzzled me if I had attempted the cure with the caustic; because

I should have been apt to suspect that I was making a new passage by my gaining ground, and yet not relieving the patient, by the removal of the symptoms.

I have often tried this practice in strictures where there were also fistulæ in the urethra, and where the water came through different passages. Such cases I should suspect were not the most favourable, yet I succeeded in the greater part of them, that is, I got through the stricture, and could pass a bougie freely. I have seen several cases of fistulæ of these parts, where the natural passage was obliterated by the stricture, in which I have succeeded with the caustic, and the fistulous orifices have readily healed up.

It does not happen always in cases of obstruction to the passage of the urine, that when the obstruction is removed by the caustic, and the water, of course, passes freely, a bougie will also pass. This I apprehend arises from the caustic not having destroyed the stricture in a direct line with the urethra, so that a bougie cannot catch the sound urethra beyond. But this appears to me of little consequence, as it is as much in the power of the bougie to prevent a return at this part as if it passed on to the bladder; for if the water flows readily, it is certain that the caustic has gone beyond the stricture, although it may not be in a direct line, and that the only risk of a return of obstruction will be at the old stricture; but as a bougie can now pass beyond that part, it does as much good as if it passed into the bladder; for I have known several cases where the bougie appeared to have the same effect as if it had passed on to the bladder.

The application of the caustic need not be longer than a minute, and it may be repeated every day, or every other day, allowing time for the slough to come off. But there are other causes that may prevent the repetition of the caustic, besides waiting for the separation of the slough; for, sometimes, the use of it brings on irritation, inflammation, or spasm in the part, which frequently occasions a total suppression of urine for a time, against which all the means used commonly on such occasions to procure relief must be employed, and we must wait till these symptoms are gone off. If the patient can make water immediately

after the application, it will be proper, as it will wash away any caustic that may have been dissolved in the passage, which if left would irritate the parts; a little water injected into the urethra will answer the same purpose.

About the year 1752, I attended a chimney-sweeper for a stricture, the first patient I ever had with this disease, and not finding that I gained any advantage after six months trial with the bougie, I conceived that I might be able to destroy the stricture by escharotics;* my first attempt was with red precipitate. I applied to the end of a bougie some salve, and then dipped it into red precipitate. This bougie I passed down to the stricture, but I found that it brought on considerable inflammation all along the inside of the passage, which I attributed to the precipitate being rubbed off in passing the bougie. I then had a silver canula made, and introduced it down to the stricture, and through this canula passed the bougie with precipitate as before. Not finding, however, that he made water any better, and not yet being able to pass the smallest bougie through the stricture, I suspected that the precipitate had not sufficient powers to destroy it; I therefore took a small piece of lunar caustic, and fastened it on the end of a wire with sealing wax, and introduced it through the canula to the stricture. After doing this three times at two days interval, he came to me and told me that he made water much better; and, in applying the caustic a fourth time, my canula went through the stricture:† a bougie was afterwards passed for some little time till he was perfectly well.

Having succeeded so well in this case, I was encouraged to apply my mind to the invention of some instrument better suited to the purpose than the abovementioned, which I have in some degree effected, although it is not yet perfectly adapted to all the situations of stricture in the urethra. The caustic should be prevented from hurting any other part of the canal; which is best done by introducing it through a canula to the stricture, making it protrude a little beyond the end of the canula, by which it acts only upon the stricture. The caustic should be

* Lately looking over some authors on this disease I find that this is not a new idea.

† Wiseman had the same idea, but seems not to have pursued it.

fixed in a small port-crayon. It is necessary to have a piece of silver of the length of the canula, with a ring at one end, and a button at the other, of the same diameter with the canula, forming a kind of plug, which should project beyond the end of the canula that enters the urethra, by which means it makes a rounded end; or the port-crayon may be formed with this button at the other end. The button being introduced into the canula, it should be passed into the urethra, and when got to the stricture the silver plug should be drawn, and the port-crayon with the caustic introduced in its place; or if the plug and port-crayon are on the same instrument, then it is only withdrawing it, and introducing the port-crayon with the caustic, which will destroy the stricture. This plug, besides giving a smooth rounded end to the canula, answers another good purpose, by preventing the canula from being filled with the mucus of the urethra as it passes along, which mucus would be collected in the end of it, dissolve the caustic too soon, and hinder its application to the stricture.*

If the stricture be in the bend of the urethra, the canula may be bent at the end also; but it becomes more difficult to introduce a piece of caustic through such a canula, for the plug and port-crayon must also be bent at the end, which cannot be made to pass through the straight part of the canula; but this I have in some measure obviated by having the canula made flexible, except at the end where it is to take the curve.†

After the hougie can be made to pass, the case is to be treated as a common stricture, either by dilating it slowly, or by quickly increasing the size of the bougie, and thus continuing the ulceration.

There are sometimes more strictures than one; but it seldom happens that they are all equally bad; one only becomes the object of our attention. The smaller ones may, however, be sufficient to hinder the passing the canula to the stricture, which is to be destroyed by the caustic. When that is the case, those small strictures are to be dilated with bougies, as in common, till they are sufficiently large to allow the canula to pass.

* Vide plate III. fig. 1.

† Vide plate III. fig. 2 and 3.

A. B. a soldier in the 16th regiment of light dragoons, had a stricture twenty years ago, and was in St. Thomas's Hospital: bougies were passed, and he got pretty well. About eight years afterwards, the stricture began to recur, and has been growing worse ever since, and for these two years past he has not been able to do his duty, the water only coming from him in drops. In this state he applied to me. Finding the smallest bougie could not be made to pass, I desired that a full-sized one might be passed down to the stricture, and its end pressed against it, for as long a time and as often as he could bear with tolerable ease, and to continue this practice for some weeks. This he did without any advantage. Being now afraid of a total stoppage of urine without the common means of relief, and there being a sensation in the perinæum threatening inflammation, I resolved to use the caustic. I applied it three times in the whole, at two days interval; and after the last application, he told me he had made water much more freely and less frequently than before. I introduced a bougie of the second or third size above the smallest, and it passed the stricture with great ease into the bladder. I then ordered him to pass the bougie, and encrease it gradually till he could use the largest, which he did; and he is now perfectly well.

The Editor thinks it is his duty to the memory of the Author, to mention, that before his death, he left off entirely the use of the silver canula, and used the lunar caustic inserted into the end of a common bougie.

CHAPTER III.

OF STRICTURES IN WOMEN.

Obstructions to the water in women, I believe, generally arise from stricture, although not always; for I have known them produced by compression from some adjacent swelling; and they are common in uterogestation, as also in dropsical or schirrous ovaria; but such causes are commonly known long before this effect is produced, by which the suppression is easily accounted for: it may also arise from excrescences, as in men.

How far a stricture in the urethra of this sex is really a consequence of a venereal inflammation I am not certain, but should suppose it was not; and for stronger reasons still than those given in speaking of the cause of strictures in men; for I can say, that in all the strictures I ever saw in women, none of them arose in consequence of this disease; at least I had no reason to believe that they did: and I have observed before, that in most women who have the venereal disease in the form of a gonorrhœa, it seldom attacks the urethra; therefore if we find a stricture in a woman, who has had the disease, we are not to impute it to that, at least till we know whether she had the disease in that canal; and even then it will remain doubtful.

Strictures are not near so common in women as in men, and this may be owing to the great difference there is in the length of the two canals; but more especially to the canal in women being more simple, and intended only for one purpose. The stricture in women does not produce such a variety of symptoms, or so much mischief, as in men, there not being so many parts to be affected.

I. OF THE CURE OF STRICTURES IN WOMEN.

The cure of strictures in the urethra of women is similar to that in men; but it is rather more simple from the simplicity of the parts. There is, however, an inconvenience attending the passing the bougie in women, that does not take place in men, which is, that in most cases it must be passed for them, it being hardly possible for a woman to introduce a bougie herself. The confinement of the bougie is also more difficult, for although they can easily be prevented from going into the bladder, by bending the outer end down upon the mouth of the vagina; yet it is very difficult to prevent them from slipping out. It will be necessary to have a bandage of the T kind, passing down between the labia over the end of the bougie.

It appears to me that the caustic would answer extremely well in such cases, and therefore I should prefer it to the bougie, both for convenience and efficacy.

II. OF THE GLEET IN CONSEQUENCE OF A STRICTURE.

I have already observed, that it happens generally, if not always, that there is a gleet when there is a stricture in the urethra. This, I suppose, arises from the irritation produced in the urethra beyond the stricture, by the urine in its passage distending this part too much, which distention is increased by the increased strength of the bladder. This symptom often leads us to the knowledge of a stricture, or at least gives a suspicion of such a disease; and when a stricture is known to be the cause, no attempts should be made to cure the gleet, for it is generally cured when the stricture is removed; but if it still remains, it may be cured as recommended in the common gleet, as probably arising from another cause than a stricture.

CHAPTER IV.

OF STRICTURE ATTENDED WITH SPASMODIC AFFECTION.

THERE are very few strictures that are not more or less attended with spasms; but some much more than others; the spasm being in some cases more the disease than the stricture itself: but real strictures are attended with occasional contractions, which makes the passing of the urine much more difficult at one time than another. In all the cases, that I have seen of this kind, when not attended with spasms, the disease is not formidable; but when the parts are in a spasmodic state the symptoms are as violent as in the simple stricture.

As this is a mixed case it has all the characters both of the permanent and spasmodic stricture; for the urethra in such cases is in a state similar to what it is in the true spasmodic kind, being very irritable, giving great pain in passing the bougie, and often rejecting it altogether; as will be taken notice of when we shall treat of that disease.

Upon considering this subject we should at first hardly be disposed to believe, that, the spasm in the urethra is in the strictured part, which can scarcely be supposed capable of contraction; and it might therefore naturally be referred to the sound part of the urethra, as being brought on by the water not flowing freely; if this is a just mode of accounting for it, we must suppose that the contraction is behind the stricture, that being the only part dilated by the water; and such urethras being very irritable, that part may contract so as to stop the flowing of the water altogether. But some circumstances occurring in practice would incline us to believe that such strictures have the power of contraction; for we find the bougie grasped by the stricture when allowed to remain some time. And the circumstance of the strictured part refusing the bougie at times is also a proof of the same.

There is sometimes this singular circumstance attending these cases, that when there arises a gonorrhœa, or any other discharge of matter from the urethra, where none was before, or an increase of an old gleet, the passage becomes so free as to allow the urine to pass as usual: but these are uncertain, and only temporary reliefs; for whenever the discharge ceases, the spasmodic affection returns. I think it most probable that it is only the spasm that is affected by the discharge, and not the real stricture. Two remarkable cases of this kind fell under my observation, which I shall now relate.

A gentleman had for a long time a complaint in the urethra attended with a stricture, which was supposed to be originally from a venereal complaint: it was often attended with a discharge which always produced a slight fever on its coming on; but, while the discharge lasted, the difficulty in making water was relieved, and that in proportion to the greatness of the discharge: and whenever he got a fresh gonorrhœa the same thing happened.

Another gentleman had a difficulty in making water, supposed to arise from a stricture; it was generally attended with such a running as is common to strictures: but when that discharge was much increased, then the stricture was less in proportion. During this complaint he contracted two different infections, both of which relieved him of the stricture for the time.

As this is a mixed disease it may be thought proper to pass a bougie for the real stricture, and for the other to use the method hereafter recommended for the cure of spasm.

It frequently happens in these mixed cases, that a bougie does not immediately pass, but is rejected by the spasm; yet by letting it lie in the urethra almost close to the stricture for ten, fifteen, or twenty minutes, it will often pass. This is as it were stealing upon it; and the water shall flow although the bougie is not attempted to be passed on. These however are only temporary modes of relief. In some instances the spasm is almost as constant as the permanent stricture; in such cases passing a bougie into the urethra for three or four inches in length, covered by some irritating medicine, and keeping this in as long at each

time as the patient can bear, will, if persevered in for a few weeks, often prove a cure for the spasmodic affection.

A gonorrhœa or occasional gleet, relieves the spasmodic state of a stricture upon the same principle as the passing a bougie a few inches down the urethra: the irritation near the glans penis takes off the spasm upon another part of the canal.

CHAPTER V.

OF SOME CIRCUMSTANCES ATTENDING THE USE OF BOUGIES—THEIR FIGURE AND COMPOSITION.

In cases of strictures where a bougie is used as a wedge, not as a stimulant, and where the stricture is so far overcome as to let a bougie pass on, the question is, whether it is better to pass the bougie the whole length of the urethra, so that the end shall be in the bladder, or only to pass it through the stricture a little way, so that the end shall remain in the urethra. Nothing but experience can determine this question, and in such cases, I believe, we seldom make a fair trial, generally pushing the bougie on to the bladder; though if we observe the consequences of the bougies not passing in those cases where they either cannot pass far beyond the stricture, or not at all, we find no inconvenience arising from this circumstance, except where they are applied with too much force, so as to make a new passage. The common idea is, that it will be more hurtful to allow the end of the bougie to lie in the urethra than in the bladder; but I imagine this is more founded in theory than practice.

Some people have such a quantity of calculous matter in their urine; or so great a disposition in their urine to deposit its calculous matter, that it only requires the presence of an extraneous body in the bladder to become an immediate cause of stone; for I have observed in some, that the end of a bougie cannot remain in the bladder a few hours without being covered with a crust of calculous matter. Such people I have generally advised to use as much exercise as all other circumstances will allow.

Bougies when first introduced often produce sickness, and sometimes

even fainting. I have seen a patient become sick, the colour leave his face, a cold sweat come on, and at last faint; but all these soon go off, and seldom return upon a second or third trial.

They at first produce an irritation on the urethra, which gives pain in the time of making water, but goes off on repetition.

They produce a secretion of pus in those cases, where there was none, and generally increase the discharge where there is one previous to their application; but this effect gradually ceases.

It frequently happens that swellings in the lymphatic glands of the groin arise from the use of bougies, but I never saw them come the length of suppuration. As in most of these cases there was a discharge of matter previous to the bougie being passed, they could hardly be owing to the absorption of matter, but must have arisen from sympathy.

When treating of the stricture, I observed that it was often the cause of a swelling in one or both testicles; and further, that the passing of a bougie often removed that complaint. I may now observe, that a very common consequence of the passing of a bougie is a swelling of the testicle: this also arises from sympathy, and like the swelling of the glands, is a common effect of all irritations of the urethra.

A gentleman who has had a stricture for many years, which at times is attended with a great deal of spasm, but has never any irritation in the testicles, upon my passing a bougie smeared with a stimulating oil for a few minutes to remove the spasm, an irritation and swelling of the left testicle came on. He afterwards caught a gonorrhœa, which entirely removed the spasm while it lasted, but also brought on a swelling of the testicle.

It may not be improper here to add some observations on the figure and composition of bougies. They ought to be about two inches longer than the distance between the glans and the stricture, or more if they can pass freely, so as always to allow an inch to bend upon the glans, and another to pass beyond the stricture. The thickness is to be according to the size of the stricture; at first to be such as will pass with a small degree of tightness, and this is to be followed up as the con-

tracted part enlarges. But when the urethra has become of the natural size, then the bougie need not be increased, but its use must be still continued, as has been observed.

With regard to the shape, they should not taper from end to end when very small, but should be nearly of an equal thickness till within an inch of their smallest end, after which they should taper to a point, forming a round wedge fitted to pass into the stricture; and this form gives them greater strength than when made to taper from one end to the other.

The consistence ought to vary according to the nature of the case, and size of the bougie. If the stricture be near the glans, a stiff bougie may be used, and the whole may be made to taper gradually, because a short bougie will always have sufficient strength for any pressure that is necessary; but if the stricture be deeper seated, as about the bulb, where the passage begins to take a curve, the bougie must be a little thicker in its body to support the necessary pressure. If the stricture be any where in the bend of the urethra, or near the bladder, the bougie should be very flexible, although this is contrary to our general position; because in this case it must bend in order to take the curve of the passage, which it ought to do with ease; for when it bends with difficulty it does not make its pressure upon the stricture, but upon the back part of the urethra, and therefore does not enter so easily; which circumstance makes it more difficult to enter a stricture near the bladder, than near the glans.

In the composition of the bougie the consistence is the most material thing to be considered, the medical properties, as far as known, being of little consequence. The materials they are commonly made of are wax, oil, and litharge.

The litharge gives them smoothness, and takes off the stickiness they would have if made of wax and oil only. A composition which answers well, is three pints of oil of olives, one pound of bees wax, and a pound and an half of red lead, boiled together upon a slow fire for six hours.

I. OF A NEW PASSAGE FORMED BY BOUGIES.

The worst consequence arising from the improper use of the bougie, and the most dangerous is, where it makes a new passage.* I mentioned before that this generally arose from the attempt to produce ulceration by the application of the end of the bougie to the stricture in cases where a bougie could not pass; for in those cases where a bougie passes there can be no danger of such an effect.

This new passage is seldom carried so far as to produce either an increase of the present disease, or a new one, although sometimes it is; yet it prevents the cure of the original disease, for it renders both the application of the bougie and caustic to the stricture so uncertain, that a continuance of either is dangerous, as they may increase the mischief, and at last produce very bad consequences.

This new passage is generally along the side of the old one, when in that part of the urethra which is on this side of the bend, and it is made in the spongy substance of the urethra; but when it is made at the beginning of the bend, then it passes on in a straight line through the body of the urethra, about the beginning of the membranous part, going through the cellular substance of the perinæum towards the rectum. When the new passage is made between the glans and the bend of the urethra, it may take place on either side of the canal equally, in the spongy substance of the urethra, between the canal and the skin of the penis, or scrotum; and it may be between the canal and the body of the penis. The situation of it will make some difference in the operation necessary for the cure of this complaint.

When a new passage is made I know of no other method of cure but to open the part externally; and the opening must be made in that part of the urethra which is most convenient for coming at the stricture; regard being had to the other external parts, such as the scrotum, &c. If the stricture be before the scrotum, the new passage will be there

* Vide plate II.

also, and therefore the operation must be made of course before that part; but if the stricture is opposite to the scrotum, the bottom of the new passage may also be opposite to this part; but if the new passage is of a considerable length, its bottom or termination may be in the beginning of the perinæum; and in either situation the operation must be begun behind the scrotum, or indeed may be made a little way into it. But if the stricture and new passage are in the perinæum, then the operation is to be performed there.

The method of performing this operation is as follows: pass a staff, or any such instrument, into the urethra, as far as it will go, which will probably be to the bottom of the new passage, and that we are certain is beyond the stricture; feel for the end of the instrument externally, and cut upon it, making the wound about an inch long, if the disease be before the scrotum; and an inch and an half, or more, if in the perinæum. If the new passage be between the urethra and the body of the penis, then you will most probably get into the sound urethra before you come to the instrument or new passage; if so it is not necessary to go further to be able to get into the bladder, as we may be certain that this part of the urethra is behind the stricture. Having proceeded so far, take a probe, or some such instrument, and introduce it into the urethra by the wound, and pass it towards the glans, which will be passing it forwards towards the stricture. If it meet with an obstruction there, we may be certain it is the stricture, which is now to be got through, and which will afterwards be easily enlarged. To complete the operation, I would advise the withdrawing the probe, and introducing in the same manner a hollow canula forwards to the stricture; then take another canula and introduce it from the glans downwards till the two canulas oppose each other, having the stricture between them; some person laying hold of the urethra on the outside, between the finger and thumb, just where the two canulas meet, to keep them in their places; then through the upper canula introduce a piercer which will go through the stricture, and pass into the lower canula; this done, withdraw the piercer, and introduce a bougie into the same canula, in the same way, being sure it passes into the lower canula, then withdraw

the lower canula and the end of the bougie will appear in the wound; lay hold of the bougie there, and withdraw the upper canula over the bougie, leaving the bougie in the urethra; now the lower end of the bougie is to be directed into the urethra leading on to the bladder, and pushed on to that viscus. It may be further necessary to lay the whole of the new passage open, that it may all heal up; for it is possible that this new passage may often receive the bougie, which is to be applied in future, which would be troublesome, and might prove an obstruction to the cure.

If the new passage be between the skin and the canal of the urethra, after cutting down to the instrument, you must go further on in search of the natural canal, and when you have found it, introduce a probe into it towards the glans to find the stricture; and when this is done go on with the operation as above described.

The bougie must be left in the passage, and as it may be found difficult afterwards to introduce another readily into the bladder, the longer the first is allowed to remain so much the more readily will the second pass. I am not yet certain but that it would be better to push on the hollow canula at first, and keep it there for some days, at least till the inflammation is over, and the parts have adapted themselves to this body, which will make a bougie pass more easily afterwards. The bougies must be gradually increased in size, and continued till the wound is healed up.

The first time I ever saw a case of a new passage formed by the bougie was at the hospital of the third regiment of guards, about the year 1765; it was in a young soldier who had a stricture, for the cure of which he had bougies regularly passed for nearly half a year without any relief. They were encouraged to go on so long by appearing to gain ground on the stricture, for the bougie went further by two inches than at first; but it being suspected that there was something more than was then understood, I was consulted, and without foreseeing what was really the case, I proposed that an opening should be made into the urethra where the obstruction was, and carried further back if necessary, in search of the sound urethra, which was accordingly done in the follow-

ing manner: the grooved staff was first passed as far down as it would go, which was to the bottom of the new passage, the scrotum was pulled up upon the penis, when the end of the staff was prominent towards the skin a little way above the perinæum, and there an incision was made on the end of the staff about half an inch long; this disengaged the end of the staff, which was pushed out at the wound, then search was made for the other orifice which led to the bladder, supposing that orifice to be the stricture, but none being to be found, we tried to trace it by blowing with a blow-pipe into the bottom and lower part of the wound, but no orifice could be observed; we then began to suspect that we were not in the urethra. To determine if we had been in the urethra, I began to dissect with care the parts at the bottom of the wound, and laid bare the musculi acceleratores. I then made an incision into the body of the urethra and came to the true canal, which was easily discovered. When this was done we passed a probe on to the bladder, then withdrew it and turned it, and passed it from this wound towards the glans penis, but found that it went not much more than two inches that way, and then stopped. This struck us with a new idea of the case, for we were now sure that the end of the staff had not been in the urethra, but in a new passage made in the spongy part of the urethra, for two inches beyond the stricture. We now passed a staff by the glans down the urethra, and another up from the last wound, to see at what distance the ends of the two instruments were, which would give us the length of the stricture. We found by taking hold of the urethra between the finger and thumb on the outside that the two ends were close together. What was to be done next was our consideration; it immediately struck us that we might force our way through the stricture with safety. The gentleman who assisted me in the operation passed a blow-pipe one-fifth of an inch in diameter, (being not sufficiently furnished with instruments) from the wound forwards to the stricture, and then I took a silver canula open at both ends, which had an iron piercer longer than itself, and passed it down to the stricture from the glans; and now the end of the canula opposed the end of the blow-pipe, and they were almost close upon one another. They were kept

in this position with the finger and thumb applied on the outside of the penis like splints on a broken bone. I then introduced the piercer, and pushed it on, which went through the stricture into the hollow of the blow-pipe. Great care was taken not to push too forcibly for fear the two ends of the hollow tubes should slip by one another, which they would do if not held firmly, as actually happened twice in this case; but we succeeded the third time. I then pushed on the canula through the stricture, and with it pushed out the blow-pipe. The next object was to pass a hollow bougie along the urethra to the bladder; to do which, the small end of it was introduced into the canula, which being pushed on, forced out the canula at the wound; we then passed a director into the other orifice of the urethra, leading on to the bladder, and put the end of the bougie into the groove of the director, and pushed it along the groove to the bladder, and before we withdrew the director we turned it round with its back to the bougie, that the end of the bougie might not stop against the end of the groove, and so be pulled out again. After all this was done, one stitch was made in the urethra, but the external wound in the skin was left for the passage of the urine, that it might not insinuate itself into the cellular membrane; we dressed the wound superficially, and applied the T bandage, which was slit to go on each side of the scrotum, and just where it came to the scrotum we tied the two ends together, which supported the scrotum, and kept it forwards on the penis, and the two ends that came from this knot on each side of the scrotum were tied to the circular part that came round the body. The patient had some slight fever for a day or two, and the urine came partly through the bougie and partly by the side of it through the wound. A swelling of one testicle came on, likewise a swelling of the glands of the groins, pain in the belly, sickness, and at times vomiting, all which symptoms were owing to sympathy, and entirely went off in five or six days. The water in nearly the same time came entirely by the natural passage. The bougie was changed from time to time till the cure was completed.

CHAPTER VI.

OF DISEASES IN CONSEQUENCE OF A PERMANENT STRICTURE IN THE URETHRA.

Strictures in the urethra produce almost constantly diseases in the parts beyond them; that is, in the part of the urethra between the stricture and the bladder. They bring on in most cases a gleet, as has been described, and often considerable distention of this part of the canal; also inflammation and ulceration, and in consequence of them diseases in the surrounding parts, as in Cowper's glands, the prostate, and the surrounding cellular membrane, forming abscesses there, and at last ulceration, for the purpose of making a new passage for the urine. The bladder is also often affected, and sometimes the ureters, with the pelvis of the kidneys, and in some cases the kidneys themselves. All these are effects of every permanent obstruction to the urine; some of them are methods, which nature takes to relieve the parts from the immediate complaints; such are the increase of the urethra beyond the stricture, and the enlargement of the ureters and pelvis of the kidneys, which are only to be considered as the parts accommodating themselves to the immediate consequence of the obstruction, which is the accumulation of urine. Of these complaints I shall take notice in their order.

I. OF THE ENLARGEMENT OF THE URETHRA.

The urethra beyond the stricture, I have observed, is enlarged, because it is more passive than the bladder, and yields to the pressure of the urine. It is naturally passive while the bladder is acting, by which means it becomes distended in proportion to the force with which the bladder acts, and the resistance of the stricture. Its internal surface often

becomes more irregular and fasciculated. It is also more irritable, the distention becoming often the immediate cause of spasms in that part; and these spasms are most probably excited with a view to counteract the effort produced by the action of the bladder.

II. OF THE FORMATION OF A NEW PASSAGE FOR THE URINE.

When the methods recommended above for the removal of stricture have either not been attempted, or have not succeeded, nature endeavours to relieve herself by making a new passage for the urine, which, although it often prevents immediate death, yet if not remedied is productive of much inconvenience and misery to the patient through life. The mode, by which nature endeavours to procure relief is by ulceration on the inside of that part of the urethra, which is enlarged, and within the stricture. The ulceration, I believe, commonly begins near or close to the stricture, although the stricture may be a considerable way from the bladder; therefore we must suppose that there is some circumstance besides the distention of the urethra by the urine which determines the ulceration to a particular part; this circumstance most probably arises immediately out of its vicinity to the stricture. The stricture is often included in the ulceration, by which it is removed, the disease cured, and a stop sometimes put to the further ulceration; but unluckily this is not always the case. We may observe that this ulceration is always on that side next to the external surface, as is common in abscesses.

As this ulceration does not arise from preceding inflammation; and as it cannot be said that the urine acts exactly as an extraneous body, because it is in its natural passage, we find that there is but very little inflammation of the adhesive kind attending these ulcerations. We must allow however, that the urine produces the ulcerative disposition here, like matter on the inside of an abscess, although not so readily.

Whenever, therefore, the internal membrane and substance of the urethra is removed by absorption, the water readily gets into the loose cellular membrane of the scrotum and penis, and diffuses itself all over these parts, from their not having been previously united by the adhe-

sive inflammation: and as the urine has considerable irritating powers when applied to the common cellular membrane, the parts inflame and swell considerably. The presence of the urine prevents the adhesive inflammation from taking place; it becomes the cause of suppuration wherever it is diffused, and the irritation is often so great, more especially in cases where the urine has been allowed to become very stale, that it produces mortification in all the cellular membrane, and then in several places of the skin: all of which, if the patient lives, will slough away, making a free communication between the urethra and external surface, producing fistulæ in perinæo.

We may observe, however, that this want of the adhesive inflammation in these ulcerations, appears to be peculiar to that part of the urethra which lies between the membranous part and the glans penis; for we find from experience, that when this process takes place further back, viz. in the prostate gland, that a circumscribed abscess is generally formed. This may arise from the difference in texture of the cellular membrane of the parts, the first admitting of the diffusions of the urine very readily from the looseness of its texture, the other producing adhesions before the urine is allowed to pass; which adhesions afterwards exclude it.

It sometimes happens that the urine gets into the spongy substance of the body of the urethra, and is immediately diffused through the whole, even to the glans penis, producing mortification of all these parts, which I have more than once seen.

When the urine has got into the cellular membrane, although the ulceration of the urethra is in the perinæum, yet it generally makes its way easily forwards into the scrotum, that part being composed of the loosest cellular membrane in the body. When the seat of the ulceration is in the membranous or bulbous part of the urethra, and the pus and urine have found their way to the scrotum, there is always a hardness leading along the perinæum to the swelled scrotum, which is in the tract of the pus.

The ulceration cannot be prevented but by destroying the stricture; but when the water has got into the cellular membrane, which is the

state we have been describing, the removal of the stricture will, in general, be too late to prevent all the mischief, although it will be necessary for the complete cure; therefore an attempt should be made to pass a bougie, for perhaps the stricture may be included in the ulceration, as was mentioned before, and thereby allow a bougie to pass. When this is the case, bougies must be almost constantly used to procure as free a passage forwards in the right way as possible. Where the bougie will not pass, I am afraid that the use of the caustic, as described in the case of a stricture, will in many cases not be quick enough, and in others cannot be tried, as the situation of the stricture is often such as will not admit of it.

While the cure of the stricture is attempting, every method is to be used that removes inflammation, particularly bleeding; sitting over the steam of warm water gives great relief; but this is merely a palliative. The warm bath, opium, and the turpentines given by the mouth and also by the anus, will assist in taking off any spasmodic affection; but all these are too often insufficient, and therefore immediate relief must be attempted, both to unload the bladder, and prevent any further effusion of urine into the cellular membrane. This must be done by an operation, which consists in making an opening into the urethra some where beyond the stricture, and the nearer to the stricture the better.

The method of performing the operation is, first to pass a director, or some such instrument, into the urethra, as far as the stricture; then make the end of the instrument as prominent externally as possible, so as to be felt, which in such a case is often difficult, sometimes impossible; if felt, cut upon it till it is exposed, continue the incision a little further on towards the bladder, or anus, so as to open the urethra beyond the stricture; this will be sufficient to allow the urine to escape, and to destroy the stricture. If the instrument cannot be felt at first by the finger, cut down towards it, which will bring it within the feel of the finger, and then proceed as above directed.

If the stricture in the urethra is opposite to the scrotum, it being impossible to make the opening there, it must be made in the perinæum, in which case there can be no direction given by an instrument, as one

cannot be made to pass so far, therefore we must be guided by our knowledge of the parts. The opening being made, the stricture is to be searched for as described in the operation, in cases where a false passage has been made, by passing a probe from the wound forwards, towards the glans. The other steps of the operation will be nearly the same. In which ever way the operation is performed a bougie must be introduced, and the wound healed p over it. In my opinion a catheter answers this purpose better.

Great attention should be still paid to the inflammation which arises in consequence of the urine being diffused in the cellular membrane, as before described. Where this inflammation is attended with suppuration and mortification, it will be necessary, as well in this case, as in that where no operation is required, to scarify the parts freely, to give an opening both to the urine and pus. Where mortification has taken place in the skin, the scarifications should be made in the mortified places, if it can be done with equal advantage, and this with a view to prevent irritation. Perhaps dressing the parts with opium might be of service.

In total suppressions of urine from whatever cause, the urine should never be allowed to accumulate, and should either be drawn off frequently, or a catheter should be kept continually in the urethra and bladder; because we should, on no account, allow the bladder to be distended beyond an easy state, for if it is, it always brings on debilitating and alarming symptoms, as paralysis of that viscus. Little regard is to be paid to the urethra in comparison of the bladder; but in many suppressions, as in cases of strictures, it becomes impossible to draw off the water. In some cases, where the urethra is ulcerated, and the urine gets into the cellular membrane of the penis, and prepuce, so as to distend them much, producing a phymosis, it becomes impossible to find the orifice of the urethra. The following case illustrates most of the preceding facts.

A gentleman of a scrofulous habit had often had venereal gonorrhœas, which were generally severe, and commonly produced swellings, or knobs along the urethra, upon which account he was advised to avoid getting this disease as much as possible. When in the country, in No-

vember 1782, he was attacked with a slight cold or fever, and a small discharge from the urethra, which he could not determine to be either venereal or not. In this state he set out for London, but was taken ill on the road with a suppression of urine, which detained him two days at an inn. When he came to town, I found him with a good deal of fever. He spoke to me only of a discharge from the urethra; but as I did not conceive that the fever could arise from that cause, I desired him to be easy on that account. I ordered for that night six grains of James's powder: his physician saw him afterwards, and ordered for his fever what he thought proper. He was taken with a shivering fit, which made us suspect it might terminate in an intermittent, and we waited for the result. He still complained of the discharge, and mentioned a soreness in the perinæum, both when he made water and when he pressed it externally. On examining the perinæum I found a fulness there, from which I suspected a stricture, and inquired particularly how he made water in common: he declared very well; which led me off from the true cause. We looked on this swelling as proceeding from an inflammation, either in consequence of the fever, the disposition of the part, or both, increased by sitting in a post-chaise for several days. The part was fomented, poulticed, and leeches applied several times. He had another shivering fit three days after the first, which if his disease had been an intermittent would have constituted a quartan; but he had another some hours after, which made us give up our suspicions of an intermittent. We now began to suspect that matter was forming in this part, although I could never feel any thing like a fluctuation; nor was the pain of the throbbing kind, or so acute as we commonly find it in the suppurative inflammation. What in some degree surprised me was, that the swelling came forwards along the body of the penis towards the os pubis, while it seemed to be diminishing in the perinæum. He now began to find a difficulty in making water, with a frequent desire, which increased till there was a total suppression. I pressed on the lower part of the belly to see if the urine was secreted and accumulated in the bladder, but I could not find any fulness, nor did he then feel pain on

such pressure; however, about twenty-four hours afterwards he began to complain of a vast desire to make water, and a pain in the lower part of his belly, and on placing the hand there, a fullness of the bladder was readily felt. It was now clear that the water should be drawn off; but as I still suspected mischief in the urethra as a cause in his complaint, I took the necessary precautions. I provided myself with catheters and bougies of different sizes, and to be as much upon my guard as possible, I introduced a bougie of a small size first, and found a full stop about the bulb of the urethra, I then took a smaller one, which passed, but with difficulty. I afterwards passed a small catheter on to the stricture, where it stopped, but as it was absolutely necessary the water should be drawn off, I used more force than I otherwise would have done; it went on, but with difficulty, and I was not certain whether it was in the natural passage, or was making a new one. When I had got so far as to be in the bladder (if I was in the right passage), I found that no water came, I therefore pressed on the lower part of the belly, and the water immediately came out through the catheter, which showed that the bladder had lost its power of contraction. The water was drawn off three times every day, that is, every eight hours, to give as much ease to the bladder as possible, but still it was necessary to press upon the belly to assist the discharge of the urine; and it was upwards of a fortnight before the bladder began to recover its power of contracting. The swelling in the perinæum still continued, advancing along the body of the penis, and spreading a little on the pubis; it seemed to extend along the projecting part of the penis, and at last filled the whole cellular membrane of the prepuce, but did not in the least affect the scrotum. This swelling appeared to be owing to the urine having found its way into the cellular membrane of the perinæum, and from thence proceeding along the side of the penis. When the prepuce became much loaded with water, a very considerable phymosis took place, which made the introduction of the catheter into the orifice of the urethra very uncertain, so much did the swelled prepuce project over the glans. I was obliged to squeeze the water back into the body

of the penis, and introduce the finger, and feel for the glans, and on this finger introduce the catheter, and in a few minutes I generally hit the orifice.

The nature of the case was now plain, for ulceration had taken place beyond the stricture, and the swelling had arisen from the urine having insinuated itself into the cellular membrane of the perinæum; and as the urine passed out of the urethra it was pushed forwards where the cellular membrane was loosest, till it got to the very end of the prepuce as beforementioned.

By this time he was become extremely low and irritable, his pulse quick and small, his tongue brown, dry, and contracted, his appetite gone, with great drought, bad sleep, and the first stages of a delirium coming on. This discovery of the true state of the case gave a change to the mode of treatment. Instead of evacuations to lessen inflammation, bark and cordials were given, with as much food as his stomach would bear; their effects on the constitution were almost immediate, and he began to recover, although but slowly. I made two punctures in the phymosis at the extremity, with a view both to take off the tension and to evacuate the urine from the cellular membrane, between the penis and the skin.

Blisters began to form on the skin of the penis, and at last mortification took place in several parts, especially on the prepuce, which I divided at the mortified parts, and thereby the glans became exposed so that the catheter could now be introduced easily.

Upon squeezing the swelling from the perinæum forwards along the penis, I could force out at the mortified parts, air, water, and some matter. The cellular membrane under the skin was almost wholly mortified. When bounds were set to the mortification, the sloughing cellular membrane began to separate, and a good deal was cut away to keep the parts clean, and to allow of a freer vent for the matter. Now that separation was taking place I was clear that no more water from the bladder could insinuate itself any further into the surrounding cellular membrane, therefore it was not necessary to pass the catheter any more, and he was allowed to make water whenever he had a call; which when

he did, the water came both ways, through the urethra, and through the cellular membrane, at the openings where the skin had sloughed off. As the sloughs separated, they came forwards from behind, at the side of the scrotum, so that I could draw them out, and when most of the mortified cellular membrane was removed, I saw a part, about the size of a sixpence, of the tendinous covering of the corpus cavernosum dead, which was also allowed to slough off. Most of the water now came through the sore. The parts became more painful, he was more restless, and one morning he had a shivering fit. I endeavoured to pass a bougie down the sore, between the skin and penis, but could not; in the evening of the same day a gush of matter and blood came out of the sore, which immediately relieved him, and he began to mend again, and continued to do so, both in the parts and his general health, the water coming both ways, but often varying in quantity between the two passages; more and more however came the right way, till at last the new passage closed up entirely.

While the external parts were healing up, I passed a bougie occasionally, to keep the passage clear and open. To find out the situation of the internal opening, I ordered him to press on different parts of the perinæum while he was making water, by which means he found that by pressing upon a particular spot he could stop the water from flowing through the new passage. He was directed however not to press too hard, for fear of forcing together the sides of the natural passage. Upon erections the penis was bent to the side that had suffered, but in time the parts gradually recovered their natural form.

III. OF INFLAMMATION IN THE PARTS SURROUNDING THE URETHRA.

Inflammation caused by the distension and irritation of the urethra often extends considerably further than the surface of this canal, for the surrounding parts become the seat of inflammation, the situation of which will commonly be according to the situation of the stricture. Thus we find the inflammation affecting the prostrate gland, the mem-

branous part of the urethra, the bulb, and probably Cowper's glands, with other parts of the urethra between the bulb and the glans. But inflammation in the surrounding parts of the urethra is not always a consequence of distension or stricture; it arises often from other irritations in this canal, such as violent gonorrhœas, and very irritating injections. When inflammation attacks these parts it is of the true adhesive kind; and therefore when suppuration takes place an abscess must be formed unless the inflammation be resolved. The matter, according to a general principle in abscesses, points externally; when the seat of the abscess is either in the prostate gland, the membranous part, or the bulb of the urethra, the matter will point in the perinæum; or the abscess may be formed forwards in the scrotum, or before it, according to the situation of the stricture.

The seat of these abscesses is generally so near the inner surface of the urethra, that the partition between them often gives way, and they open internally, as frequently happens in an abscess by the side of the rectum, so that the matter is at once discharged by the urethra or carried back into the bladder to be discharged with the urine. When the internal opening only takes place, I believe it is owing to the ulceration of the inner surface of the urethra having taken place, as has been already described; and in these cases also the stricture is sometimes involved in the abscess and ulceration, by which means the water will find a free passage forwards; but the urine has also a free passage into the abscess, which we may suppose retards its healing, and often becomes the cause of its opening externally; but here, from the adhesive inflammation having taken place, the urine cannot insinuate itself into the surrounding cellular membrane, so as to produce the consequences mentioned in treating of the way in which nature endeavours to relieve herself. In such cases we find, upon pressing the abscess externally, the matter is squeezed into the urethra, and so out by the glans. It sometimes happens that a catheter can be introduced into the opening of such an abscess, by which means it can be washed by injecting something through the catheter, whereby probably it may be sooner healed.

It more frequently happens that such abscesses open both internally and externally, discharging themselves both ways.

These ulcerations and suppurations of both kinds are to be considered as efforts of nature; or to speak more physiologically, as a natural consequence arising from such irritation, by which, as the urine cannot pass by the old passage, a new one is made to prevent further mischief.

Both these diseases, when they open externally, if not properly treated, often lay the foundation for the complaint commonly called the fistula in perinæo; which is owing to the bottom of the abscess having a less disposition to heal than the external parts. It may be further supposed, that the urine passing into the abscess by the inner orifice, and making its escape by the external, keeps up a constant irritation in the sore, which in some measure may prevent a union of the sides, and rather dispose them to form themselves into a hard callous substance, whose inner surface loses the disposition for union, and assumes the nature of an outlet.

But it is more than probable that these abscesses not readily healing, depends upon the cause of their first action often continuing in full force, that is, a diseased state of the internal parts, as will be further illustrated when on the fistula in perinæo. They often heal up at the orifice in the skin, especially if the water has a free passage forwards; but if the internal opening is not perfectly consolidated, some water will insinuate itself into the old sore, become the cause of fresh inflammations and suppurations in the surrounding parts, which frequently open externally in different places, not following the old canal, although they sometimes communicate with it and form branches, as it were, from the principal trunk. I have seen the scrotum, perinæum, and inside of the thigh, full of openings which were the mouths of so many sinuses leading to the first formed abscess. When the abscess opens only externally, which is seldom the case, it is to be considered as a common abscess.

When these inflammations arise from stricture, the difficulty in making water is increased in the time of the inflammation, which is generally so great as to compress the sides of the urethra together for some

way; besides, the stricture itself will become tighter from being inflamed. Inflammation in these parts, even when it does not arise from a stricture, brings on a suppression of urine; but in such cases a bougie or catheter can be passed; the last of which, in cases of obstruction arising from contiguous swellings, as tumors, inflammations, and swelled prostate gland, is the proper instrument, as the sides of the urethra would be pressed together immediately upon withdrawing the bougie, by which the urine would be as much as ever prevented from following.

IV. OF THE TREATMENT OF THE INFLAMMATION IN THE SURROUNDING PARTS.

The inflammation of these parts is to be treated like other inflammations. Resolution is much to be wished for; but it is almost impossible it should take place where stricture is the cause. When the stricture is removed, either by ulceration or a bougie, we have only the inflammation to contend with; but this seldom happens, for the inflammation is but too often accompanied with suppuration.

When suppuration takes place, the sooner the abscess is opened externally the better, as that may in some cases be the means, though seldom, of preventing its opening internally; yet it may prevent the inner opening from becoming so large as it otherwise might do. The opening externally should be large; and if the stricture is not involved in the suppuration, then it must be destroyed; because no cure can take place while the water passes through the new opening. I have succeeded with the caustic even in strictures of long standing.

When the stricture will admit of the passage of a bougie through it, it is to be kept almost constantly in the urethra, and to be withdrawn only at the time of making water; this will allow the urine to pass more freely through the urethra, without escaping through the sore. The sore must be healed up from the bottom.

In many such cases of abscess in perinæo where the stricture has been destroyed, the passage at that part is so irregular, that the catheter is the best instrument to use; and where the parts are much contracted, a flex-

ible catheter may be readily introduced down to the stricture, and then a curved stilet passed into it, which will admit of its being directed into the bladder. In this way I have sometimes succeeded when all other attempts have failed.

Hollow bougies are recommended in such cases, after the stricture is destroyed, to prevent the urine passing through the wound. This instrument admits of a constant dribbling of urine through it; but the bougie may be occasionally stopped up, and the urine permitted to pass when there is a desire to make water. It becomes under certain circumstances the worst instrument possible, for if its canal is not of a size sufficient to let the water pass as freely as the contraction of the bladder requires, the water will pass easily by the side of the bougie to the abscess, and not getting forwards beyond the stricture, flow out at the abscess. To avoid this effect as much as possible, the hollow bougies should be as large as the strictured part will allow, and its sides should be as thin as possible, that its passage may be the larger. The elastic gum has these two properties in a higher degree than the spiral wire covered with waxed cloth. But as I doubt very much the passage of the urine being an hindrance to the healing of the sore, I am less solicitous about such practice; for we find that after cutting for the stone the parts heal very readily; and even in this operation the external parts which are not diseased heal up very readily. I suspect that the want of disposition to heal arises from the strictures not being sufficiently subdued, or the deeper parts not being in a healthy state.

When these suppurations are left to themselves, and no method tried to remove the stricture, and of course nothing introduced into the urethra, the stricture sometimes closes entirely up, so that no water can pass forwards through the urethra; and therefore before any attempt can be made to heal the fistulous orifices, a passage must be made through the united parts. This cannot be done with a bougie; and if this union of the parts is before the bend of the urethra, which most commonly it is, nothing but the caustic can be applied with any prospect of success, as will be mentioned more fully in treating of the fistula in perinæo.

V. OF THE EFFECTS OF INFLAMMATION IN THE SURROUNDING PARTS UPON THE CONSTITUTION.

The effects, which these attempts to form a new passage for the urine have upon the constitution, are very considerable; much more so than what one would at first expect. Those cases appear to be most formidable which begin by ulceration on the inner surface of the urethra, and where the water diffuses itself into the cellular membrane of the scrotum and penis.

These where the inflammation is circumscribed are more the true abscess, and therefore do much less mischief to the parts than when the urine is diffused in the cellular membrane. In these last, if not soon relieved, the patient sinks, and a mortification comes on. If before the patient sinks, a separation of the slough takes place, this separation performs the operation of opening, and the patient may recover. We should not, I believe, wait for such separation of the mortified part, but make an opening early, upon the first knowledge of a diffusion of water into the cellular membrane; and we should be guided as to situation by introducing a staff into the urethra on to the stricture. But in some cases this cannot be done, for when the urine gets into the corpus spongiosum, it produces mortification of all these parts, and renders the whole so indistinct that often no urethra can be found.

The effects that the circumscribed inflammation has upon the constitution, is generally not so serious as the above, for mortification as seldom takes place in this as in abscesses in general. When the abscess is from the bulb backwards, there is generally a smart sympathetic fever, because the abscess will be of considerable size before it gets to the skin of the perinæum, and is generally attended with great pain; but this pain goes off by the formation of the matter, especially if opened early.

As there is a great disposition for violent action, attended with great weakness in such cases, more especially in those of the first kind, it is advisable to give the bark early, and in considerable quantity; but I apprehend it is necessary to give along with it sudorifics, as the saline

draughts, or some of the preparations of antimony, as there is generally a good deal of fever. The bark gives strength, and also in some degree lessens irritability, and by that means lessens action; but it should be assisted by other medicines: opium will add to its effects.

VI. OF FISTULÆ IN PERINÆO.

It often happens that the new passages for the urine do not heal on account of the stricture not being removed; and even when the stricture is removed, they frequently have no disposition to heal. In both cases they become fistulous, and produce fresh inflammations and suppurations, which do not always open into the old sore, but make new openings externally. These sometimes arise from the first external openings not being sufficiently large, so that they heal up long before the bottom, or long before the diseased urethra; and even when the external opening has been made as large as possible, it will often heal sooner than the bottom, and become fistulous at last.

It is very common for these diseases to affect the constitution, so as to bring on aguish complaints. I have seen several affected with regular agues, where the bark has produced no effect; but whenever the obstruction has been got the better of, or the fistulous orifice opened and in a state of healing, these complaints have entirely gone off.

To cure this disease, it is necessary first to make the natural passage as free as possible, that no obstruction may arise from that quarter, and sometimes this alone is sufficient; for the urine finding a free passage forwards, is not forced into the orifice, and the parts lose the sensation of disease, or the necessity of keeping open. Besides, I apprehend that the bougie may bring on an inflammation on the urethra at this part, and produce adhesions there; but if this effect is not produced early, the bougie will rather do harm if applied too often, and too long at a time, as will be more fully explained. But this practice of dilating the stricture is not always sufficient; it is often necessary to perform some operation on those fistulæ, when they alone become the obstacle to the cure, which I shall now describe.

VII. OF THE OPERATION FOR FISTULÆ IN PERINÆO.

When the before-mentioned treatment is not sufficient for the cure of these new passages, a method should be followed similar to that, used in the cure of a fistula in other parts, by laying it freely open to the bottom, and even making the orifice in the urethra a fresh sore if possible. This will be difficult in many situations of the internal opening; and the mode of opening, and other circumstances attending the operation, will vary according to the situation.

That as little of the sound part of the inner surface of the urethra may be opened as possible, and that the diseased part may be fully exposed, it is necessary to be well directed to the inner orifice, for which we have commonly two guides; one is a staff introduced into the urethra as far as is thought necessary, or as far as it will go, which will only be to the stricture, where the stricture still exists, or it may pass on to the bladder in cases where the stricture has been destroyed; the other guide is a probe passed into the fistulous orifice. The probe should be first bent, that it may more readily follow the turns of the fistula, and be introduced as far as possible; if it could be made to meet the staff, so much the better, as then the operator could cut just what is necessary. If a straight probe could be made to pass, then, perhaps, a director might; if so, it is the best instrument for operating upon. If neither the probe, nor the director, can be made to pass on to the staff, we must open as far as they go, and begin searching anew after the remainder of the passage with the same instrument, and pursue it till the whole fistulous canal is laid open. If there are any sinuses, they are to be laid open if possible; but it frequently happens that they cannot be followed by the knife, some running along the penis where the scrotum is attached, others passing on towards the pubis round the penis, while others are about the membranous part of the urethra. In such cases I would not be delicate; I have several times introduced my finger into these sinuses, and have torn the parts so as to produce a considerable inflammation, by which means they often suppurate, granulate, and unite.

If the situation of the internal orifice is opposite to the scrotum, it will be difficult to get to it, but I imagine we may use great freedom with the external parts, whatever they are, for they are generally in a state of callosity. However, this is to be done with judgment.

In cases, where the disease is before the membranous part, and the stricture is not removed, a staff cannot be made to pass on to the inner orifice. In such the fistulous opening must be followed by introducing a probe or director into it, and dilating upon the instrument till the urethra beyond the stricture is found; and then a probe must be passed on towards the glans, to meet the end of the staff at the stricture; similar to what is done in the operation, where a false passage has been made by the mismanagement of the bougie; the stricture must then be destroyed, and a bougie passed, as was recommended in that operation.

If either the ulceration, or the abscess, is formed in or near the prostate gland, then probably the stricture is near that part. In that case, a staff must be passed as far as possible, and a probe or director introduced into the external orifice, and the operation is to be directed accordingly. The difference of the operation in this case from the former will be, that we shall most probably be obliged to get into the urethra on both sides of the stricture, therefore more of the canal must be exposed.

As this operation is the opening of all the fistulous canals, and also the destruction of the stricture, if there has been one, an instrument now can, in every case, be passed into the bladder. It will most probably always be proper to introduce an instrument into the bladder, and keep it there almost constantly, so as to preserve the passage of the urethra in a regular form, while the openings made are healing; and probably the catheter will be by much the best instrument, because it is not necessary to be withdrawn whenever the necessity to make water comes on, which a bougie must; and its introduction again is often not practicable, for its end will be apt to get into the wound, &c.

In such cases as require a hollow canula to be left in the bladder for the purpose of taking off the water: whether a catheter or hollow bougie, it is absolutely necessary it should be fixed there, or else it will in com-

mon come out by the actions of the part. To effect this, it is necessary to fix that end of the instrument out of the penis to some part of the body that is the least moveable. What will answer extremely well, is the common belt-part of the bag truss, with only two thigh-straps fixed behind, and made to tie or buckle before; and two or three very small rings or short tapes fixed to those straps: where they pass between the thigh and scrotum, they should not be at a great distance from one another where they are fixed behind to the belt, for otherwise they are much altered in tightness by the motion of the thigh. If they have a flat spring in them, so much the better.*

The common bag-truss for the scrotum answers extremely well, first, by fixing two or three rings on each side of it along the side of the scrotum, and with a piece of small tape the ring of the canula can be fastened to any one of those rings that is most convenient for its situation.

Whatever instrument is used for the purpose of keeping the passage clear and open while the sores are healing, whether the sores are in consequence of this operation, or in consequence of the causes of the fistulæ, which I have described, there is a limited time in many cases for its continuance; for, if continued beyond a certain period, it frequently acts contrary to what was intended; at first it often assists the cure, but towards the last it may obstruct the healing of the sores, by acting at the bottom of the wound as an extraneous body. Therefore whenever the sores become stationary, I would advise the withdrawing of the instrument, and the introducing it only occasionally. The catheter will probably be still the best instrument for this purpose, as it will pass more readily, and draw off the water at the same time. However, I have often used a bougie, and by great care have passed it with success; and probably it will be proper to use it every now and then, even when all is healed, to know if the passage keeps well.

The sore and the wound are to be at first dressed down to the bottom as much as possible, which will prevent the reunion of the parts just

* Mr. Vanbutchell's springs would answer very well.

divided, and make the granulations shoot from the bottom, so as to consolidate the whole by one bond of union.

When the urethra has suffered so much that abscesses have formed beyond the scrotum, the patient should ever after take great care to avoid a fresh gonorrhœa, for he seldom, in that case, escapes a return of the same complaints; and, indeed, if he is not careful in many other respects, he is liable to returns of the same disease. If, notwithstanding this precaution, he should contract a gonorrhœa, every thing heating is to be carefully avoided, particularly irritating injections.

The following case shows that keeping extraneous bodies in the urethra, prevents wounds made into the canal from healing:

A man, aged twenty-six, came into St. George's Hospital, March 2, 1783. He had laboured under a fistula in perinæo for near two years, arising from a stricture, attended with great pain and difficulty in making water. Four fistulous orifices were to be observed in the perinæum and scrotum. The smallest bougie could not be made to pass into the bladder, after repeated trials. The caustic was then applied, but without success.

The operation for the fistula in perinæo was performed, September 19. A catheter was first introduced as far as it would go, as a director, and all the sinuses were laid open to that catheter, which exposed near an inch of that instrument; then the catheter was in part withdrawn to expose that part of the urethra which was laid bare. The blood being sponged off, the orifice in the stricture was next searched for, and when found it was dilated. The catheter was now pushed on to the bladder, although with some difficulty, and the end of it was then fastened to a roller which went round the thighs; and the wound was distended with lint. He took an anodyne draught after the operation, and another at night. September 20, he had some pain in the head from the opiates, his pulse was natural, and he had slept tolerably well.

21. This day the catheter slipped out, and the second introduction of it gave considerable pain. The anodyne was repeated.

October 1. The catheter was still to be felt by introducing a probe into the wound.

From this time to the 25th, nothing material happened, excepting a piece of lint of the first dressing coming away through the urethra.

November 20. The wound having for some time been stationary, and showing no disposition to heal, I conceived that the catheter was now acting as an extraneous body at the bottom of the wound, and therefore desired that it might be withdrawn, and passed occasionally; and no sooner was the wound free from it but it put on a healthy look; and by the 10th of December no urine came through the wound, but passed tolerably well through the urethra; and on the 12th the wound was quite healed, and his water came from him in a pretty full stream, and without pain, although we could never pass either catheter or bougie afterwards, probably from the new and old passages being irregular.

The Editor has found that in all cases of fistulæ in perinæo, in which, by means of the caustic, the stricture had been completely removed, nothing more proved necessary for the complete cure of the fistulæ.

CHAPTER VII.

OF SOME OTHER AFFECTIONS OF THE URETHRA.

The substance of the urethra is muscular, and it is therefore capable of contracting its canal, similar to an intestine, so much so as to shut it up entirely. This makes it subject to diseases peculiar to muscle in general; which is indeed the only proof we have of its being muscular.

I. OF THE SPASMODIC AFFECTIONS OF THE URETHRA.

In a sound state of parts these muscles are never excited to violent actions, acting simply as sphincter muscles; but when irritated, they are capable of acting violently, as is best seen in some cases upon the first use of injections, the urethra often refusing the injection entirely. This seems rather to be a salutary motion to hinder things from getting into the bladder; but there are often spasmodic contractions of these muscular fibres in different parts of the canal shutting up the passage and obstructing the course of the urine, often not allowing a drop to pass. That this also is owing to spasm upon the muscular fibres is evident, because a large bougie will sometimes pass when it is at the worst. When the contraction is near the bladder it is called a strangury, and is often produced in a sound state of parts by irritating medicines, the power of which fall upon these parts, as cantharides; and when this part is in an irritable state, the spasm may be brought on by a vast number of things, such as most of the peppers, fermented liquors of all kinds, violent exercise, &c.

The urethra in cases of spasmodic stricture is more irritable than in the true stricture, which irritation indeed is in a great measure the cause of the spasm. Spasmodic strictures often bear so strong a resemblance

to the cramp, that one would be apt to attribute them to the same cause as that, which produces cramp. In such cases the spasm also goes off by tickling the part similar to the removal of cramp.

In all cases of very irritable urethras, where spasm very readily takes place, the person should never long retain his urine when he has an inclination to make it ; for I have seen cases where this alone has brought on the spasm ; and these parts, when in perfect health, will be thrown into a spasmodic affection, if the urine is too long confined in the bladder; while at the same time a certain fulness of the bladder, or a small degree of retention of the urine will make the bladder contract with more force ; and the urethra will for the same reason relax more freely ; therefore in cases, where there is a tendency to strangury there is seldom any harm in waiting a little after the inclination comes on.

I may be allowed here to caution surgeons, who have not had opportunities of seeing many of these cases, when they meet with permanent strictures, which are becoming troublesome, attended with frequency in making water, and a difficulty in passing it, often threatening strangury, not to advise, or rather not to allow, their patients to take long journies either on horseback or in carriages, more especially in the winter when the weather is cold ; for I have known many patients labouring under such complaints taken ill in the middle of a journey, and obliged to stop for days upon the road, and who have continued in misery the remainder of the journey ; and after having arrived at the place of their destination, have been laid up for months, and have suffered from most of the before-mentioned complaints.

II. OF THE CURE OF THE SPASMODIC AFFECTION OF THE URETHRA

It may not be improper to premise, that in diseases of the actions only of the urethra and bladder, whether spasmodic, and proceeding from too great irritability, or paralytic, although two opposite diseases, irritations on other parts have often wonderful effects on both, equally diminishing the action in the one, and increasing it in the other The

proof of this will appear in treating of the irritable and paralytic urethra and bladder; for in either part, and in either case, we find blisters applied to the lower part of the small of the back or the perinæum, as also many other applications to this part, often producing great effects.*

As spasm simply is not an alteration of structure, but is only a diseased or preternatural action arising from some irritation, it may be made to cease instantaneously. In whatever part of the urethra the spasm is, if time will allow, it is proper to try internal medicines and also external applications, to remove it. The internal medicines that may be said to act immediately are opiates and turpentines,† given either by the mouth or the anus; but they are more immediate in their effects in the form of clyster, especially the opium. It is very possible that camphire might be of use in stranguries arising from spasm, as well as in those produced by cantharides. Bark is often had recourse to in spasmodic affections, in which it is thought to be of service; but in such affections of the urethra I think I have seen it frequently do harm.

The external applications are the steam of warm water with spirits, the pediluvium, the warm bath, bladders of warm water applied to the perinæum, and similar applications. The crumb part of a new baked loaf, warm from the oven, applied to the perinæum, has been found to give ease.

I have known a blister applied to the loins in a great measure remove the spasm from the urethra; and the same put upon the perinæum is fully as effectual. But in most cases these methods are too tedious; therefore when the case has been of some standing before

* That the parts concerned in the expulsion of the urine (as the bladder and urethra) sympathise strongly with the skin of the perinæum, I believe is commonly supposed, from applications being often made to that part in cases of stoppages of urine. This sympathy not only takes place in the diseased actions of those parts so as to bring about a natural action, but often becomes a stimulus to natural actions where there is no disease.

A gentleman who had no complaint in these parts, had a small fistula at the side of the rectum, for which he often had occasion to sit over the steam of warm water and vinegar; and this application to the perinæum never failed of making him make water.

† Dr. Home, in his experiments on this medicine, found that large doses brought on the strangury in women.

assistance has been called for, and requires immediate relief, recourse should be had to the catheter or bougie immediately.

If the contraction is near the bladder, the catheter will answer best; but in most cases the bougie will be sufficient, and is a much safer instrument; for in many hands the catheter is a very dangerous one, requiring a dexterity only to be got by a thorough knowledge of the course of the canal, and a habit of passing it. The bougie has likewise this advantage, that in many cases where the part spasmodically affected will not allow it to pass, it may be allowed to lie close to the stricture; for it is not always necessary for the bougie to pass through the constricted part; as I have seen where a bougie has only passed a little way into the urethra, and by letting it stay there till the desire of making water has come on, the water, on withdrawing the bougie, has followed very freely. In such cases, even when the bougie passes into the bladder, it is necessary to let it stay in the passage till the inclination to make water comes on, and then to withdraw it; if the water does not follow on the first attempt, it will be proper to make another, or if only part follows the bougie, it will be necessary to introduce it again. This circumstance of the water following the bougie with more certainty if it is allowed to stay till the inclination comes on, is a proof that the disposition in the bladder for contracting, removes in some degree the disposition for contraction in the urethra.

Some attention is necessary with respect to the passing of the bougie in these cases, for the urethra being more irritable than common, it often resists the bougie before it reaches the true spasmodic part; when this is the case force is not to be used, but we should rather wait a little with patience, and then make another attempt to push it on. Dipping the end of the penis in very cold water often removes the spasm, and the water flows immediately and freely.

In most cases there is an uneasy sensation at the end of the penis which leads the patient to rub those parts, and sometimes, though rarely during the friction, the water will pass. Gently irritating injections only thrown in a little way, often give ease. They act, I suppose, some-

what like the bougie that does not pass: by irritating one part of the urethra the other relaxes. They act in some cases as a preventive.

III. OF THE PARALYSIS OF THE URETHRA.

In opposition to the foregoing disease, there is the want of power of contraction of the urethra; but this is not so frequent a case as the former. This disease is attended with symptoms contrary to those of the foregoing; the bladder is hardly allowed to be filled so as to give the stimulus of repletion; but the water dribbles away insensibly as fast as secreted by the kidneys; or if the bladder is filled so as to receive the stimulus for expulsion, then it immediately takes place, and the water flows, if the person does not act with the musculi acceleratores; but sometimes in such cases the power of contraction of these muscles is lost, and then the water will flow, whether the person will or not, there being little or no power of retention. There is great difference in the degrees of violence of this disease.

IV. CURE OF THE PARALYSIS OF THE URETHRA.

It is to be cured by stimulants, as a blister to the loins, or a blister to the perinæum. Putting the feet into cold water may be useful. Cantharides taken internally, fifteen or twenty drops once or twice a day, according to their effects, are of singular service in some cases.

A man came to St. George's Hospital with this complaint. I ordered him the before mentioned medicine, and it had such an effect as to bring on the contrary disease, or a spasmodic affection of the urethra, so that he could not make water when he had the inclination; but an injection of opium removed this complaint, and he was then well. In this case a few drops less, probably, would have effected a cure without any inconvenience.

Spices, and steel medicines are of service; and from what was said before of the bark, I should suppose it a good medicine. Electricity

may also be tried. Washing the parts with cold water may probably be of service.

V. OF CARUNCLES OR EXCRESCENCES IN THE URETHRA.

Strictures are not supposed to be the only causes of obstruction to the passage of urine in this canal; excrescences or caruncles are likewise mentioned by authors as happening frequently. From the familiarity, with which they talk of them, and the few instances in which they really occur, one would suspect that this cause of obstruction was originally founded in opinion, and not observation, and afterwards handed down as matter of fact. If caruncles had been at first described from actual examination of cases, the language would have accorded with the appearances, and they would have been considered as seldom the causes of obstruction, compared with strictures. However, they do sometimes happen, although but rarely. I have, in all my examinations of dead bodies, seen only two, and these were in very old strictures, where the urethra had suffered considerably. They were bodies rising from the surface of the urethra like granulations, or what would be called polypi in other parts of the body. It is possible they may be a species of internal wart, for I have seen warts extend some way into the beginning of the urethra, having very much the appearance of granulations. Most probably it will not be possible in the living body to distinguish caruncles, excrescences, or risings in the urethra, from a stricture: for I cannot conceive that they can produce any new symptoms, or peculiar feel to the examiner.

VI. OF THE CURE OF THE EXCRESCENCE OR CARUNCLE.

I should very much suspect that this disease is not to be cured by the bougie; at least dilatation in such cases is not to be attempted, as there is no contraction. If therefore the bougie is of any use, it must be in making the carnosity ulcerate from its pressure, which probably may be done by a large bougie pressing upon it with considerable force. But

if this should not have the desired effect, I should certainly recommend to use the caustic, if the parts were so situated as to admit of the application; and from such practice I should not doubt of a cure. But the difficulty lies in distinguishing the disease from a true stricture; for although authors talk of caruncles as common, and give us the method of treatment, yet they have not told us how we are to distinguish them from strictures.

I have never met with a caruncle in women.

CHAPTER VIII.

OF THE SWELLED PROSTATE GLAND.

Another disease of the parts surrounding the urethra, which is often very formidable, is a swelling of the prostate gland. It is of more serious consequence than any of the former causes of obstruction, because we have fewer methods of cure; for we cannot destroy it as we can the stricture, nor can nature relieve herself by forming new passages; we have, however, often the means of temporary relief in our power, which is not the case in the stricture, for most commonly we can draw off the water by the catheter.

The swelling of the prostate gland is most common in the decline of life, seldom happening to young men. The use of this gland is not sufficiently known to enable us to judge of the bad consequences that attend its diseased state, abstracted from swelling. Its situation is such, that the bad consequences of its being swelled must be evident, as it may be said to make a part of the canal of the urethra, and, therefore, when so diseased as to alter its shape and size, it must affect that canal. When it swells, it does not lessen the surface of the urethra at the part similar to a stricture; on the contrary, it rather increases it; but the sides of the canal are compressed together, producing an obstruction to the passage of the urine, from which an irritation takes place in the bladder, that brings on all the symptoms in that viscus that usually arise from a stricture or stone. From the situation of the gland, which is principally on the two sides of the canal, and but little if at all on the fore part, as also very little on the posterior side, when it swells it can only be laterally, whereby it presses the two sides of the canal together, and at the same time stretches it from the anterior edge or side, to the posterior, so that the canal, instead of being round, is flattened into a narrow groove.

Sometimes the gland swells more on one side than the other, which makes an obliquity in the canal passing through it.

Besides this effect of the lateral parts swelling, a small portion of it, which lies behind the very beginning of the urethra swells forwards like a point into the bladder, acting like a valve to the mouth of the urethra, which can be seen even when the swelling is not considerable, by looking upon the mouth of the urethra from the cavity of the bladder in a dead body. It sometimes increases so much as to form a tumor,* projecting into the bladder some inches. This projection turns or bends the urethra forwards, becoming an obstruction to the passage of a catheter, bougie, or any such instrument; and it often raises the sound over a small stone in the bladder, so as to prevent its being felt. The catheter should for this part be more curved than is necessary for the other parts of the urethra. In such cases I have frequently passed first a hollow elastic catheter till it came to this point, and if it chanced to go over it is very well; but if it does not, a stilet or brass wire properly curved to go over the prostate gland is to be passed down. The advantages of this method are, that if the hollow catheter passes, no more is necessary, and if it does not, the curved wire will pass along the hollow bougie much easier both to the surgeon and patient than it would have done if it had been introduced at first with the hollow bougie over it; for it would be forcing by its end to adapt the urethra to the curve, whereas when introduced afterwards the stilet is only acting on the inside of the hollow bougie, which the patient hardly feels.

A gentleman had been often sounded for a stone, and yet no stone could be found; but it afterwards appeared that there was a stone together with the swelling of the prostate gland, which had been the cause of his death.

John Doby, a poor pensioner in the charter-house, had been several years afflicted with the stone in the bladder, and was relieved from all the symptoms by an enlargement of this part of the prostate gland, preventing the stones from falling down upon the neck of the bladder and irritating these parts. A twelvemonth after the symptoms of the

* Vide plates V. and VII.

stone had gone off he was attacked with a strangury, to relieve which, many ineffectual attempts were made both with the bougie and catheter, but it soon proved fatal.

Upon examination of the parts in the dead body, the prostate gland was found enlarged to a size six times greater than what it is in common, and the urethra passing through it was a slit about an inch and half in length, the two sides of which were close together, the upper end towards the pubes and the lower towards the rectum. This slit was formed by the sides of the prostate gland only swelling, and the right side was the most enlarged, having its surface next the urethra rounded or convex, and the left side was exactly fitted to it, having its surface hollowed in the same proportion. The small projecting point of the gland was so much enlarged, as to come forwards into the cavity of the bladder and fill up entirely the passage at the neck of it. The bladder itself was very much enlarged and thickened in its coats, and contained above twenty stones, most of them lying behind the projecting process of the prostate gland, and the rest lodged in small sacs, made by the internal membrane being pushed some little way between the fasciculi of muscular fibres.

The prostate gland when swelled, generally becomes considerably firmer in its consistence. The effects of these swellings are very considerable, for they squeeze the sides of the urethra close together, and the projecting point hinders in some degree the urine from entering the passage, and in many cases stops it entirely. Further, the increased firmness of the substance of the gland hinders it from yielding to the force of the urine, so that little or none can pass. It will be unnecessary to relate the particular symptoms which this disease occasions; they are such as arise from any stoppage of urine, producing an irritable bladder.

When a difficulty in making water takes place, a bougie is the instrument the surgeon will naturally have recourse to, and if he finds the passage clear, which he often will, in such cases he may very probably suspect a stone. If search is made and no stone felt, he should naturally suspect the prostate gland, especially if the sound or instrument he

searched with, meets with a full stop, or passes with some difficulty just at the neck of the bladder. He should examine the gland. This can only be done by introducing the finger into the anus, first oiling it well, placing the fore part of the finger towards the pubis; and if the parts as far as the end of the finger can reach are hard, making an eminence backwards into the rectum, so that the finger is obliged to be moved from side to side, to feel the whole extent of such a swelling, and it also appears to go beyond the reach of the finger, we may be certain the gland is considerably swelled, and is the principal cause of the symptoms.

In those cases where only the sides of the gland are principally swelled, either a catheter or bougie can be easily passed, but the projecting point often prevents this relief. It is with great difficulty that a catheter or bougie can be got to pass over it when of a considerable size, as it gives too quick a turn to the passage. It is necessary in these cases to be very careful, especially with the catheter; the flexible is the best; but even that instrument will often stick against this process, and by pushing it on, the point will be rather bent backwards than forwards, so that it cannot pass.

I have known cases where the common catheter has been pushed through this projecting part into the bladder, and the water then drawn off; but in one patient the bleeding from the wound passed into the bladder, and increased the quantity of matter in it: the use of the catheter was attempted a second time, but not succeeding, I was sent for. I passed the catheter till it came to the stop: and then suspecting what was the case, that this part of the prostate projected forwards, I introduced my finger into the anus, and found that gland very much enlarged. By depressing the handle of the catheter, which of course raised the point, it passed over the projection, but unfortunately the blood had coagulated in the bladder, which filled up the holes in the catheter so that I was obliged to withdraw it, and clear it repeatedly. This I practised several days; but suspecting that the coagulum must in the end kill, I proposed cutting him as if for the stone; but he died before it could be conveniently done, and the dissection after death explained the case to be what I have now described.

In some of those cases where this part of the gland has swelled into the bladder in form of a tumor, the catheter has been known not to bring off the water at times, when it appeared to have passed; and upon the death of the patient, when the parts were examined, there has been reason to believe that the catheter had made its way into the tumor so as to have been buried in it at those times.

From the knowledge of the above facts, and from the mode of accounting for the symptoms, whenever I find the urine does not flow immediately upon introducing the catheter into the bladder, I have pushed it on and depressed the handle so as to reach the fundus of the bladder with the end of the catheter, and have always succeeded.

For the more ready introduction of the instrument, a catheter made flexible at the point only for about an inch, is perhaps best, as it is more under the command of the hand than when wholly flexible.

If the bougie be used, it should be first warmed and then very much bent at the point, and allowed to cool in this position, and passed quickly with the concave side upwards, before it loses the bend in its passage. But the bougie does not answer so well as the catheter, because upon withdrawing the bougie the sides of the gland soon close again. I have known, where the water has passed by the side of the bougie with more freedom than when it was pulled out, because the bougie gave a straightness to this part of the canal which it had not when the bougie was withdrawn. The following case is a strong instance of the inconveniences arising from such a disease of the prostate gland.

A gentleman was attacked with a suppressiou of urine; a catheter could not be passed, but a bougie passed very readily and relieved him. He continued well for five years; but the same complaint returned, the bougie could not be passed, and the disease was supposed to be a stricture. A catheter however passed, although with a good deal of difficulty; and the bougie, though often tried, could not be passed, excepting once, just after using the catheter. I was sent for, and tried the bougie with as little success, and was obliged to have recourse to the catheter. I passed it with great ease, and the water was drawn off.

The late Mr. Tomkyns, who had Daran's bougie, was sent for; but he was not more successful, and was obliged to have recourse to the catheter; but such violence was used as to cause a good deal of blood to come from the urethra, and after all it was not passed. I was sent for again, and passed the catheter, but with much more difficulty than before, which made me believe that the passage had been a good deal torn. Upon taking out the catheter I passed a large bougie into the bladder with great ease; this I allowed to remain for three days, and he made water tolerably freely by the side of it. The moment I drew out the bougie I attempted to pass another, but did not succeed, although I gave it the natural bend of the passage. Upon withdrawing those bougies that did not pass, I observed that all of them had a bend at the point, contrary to the direction of the passage; this made me suspect that the place which stopped the bougie was on the posterior surface, and that by pushing it on, it bent forwards into the passage, and of course the point turned back. I therefore took a thick bougie; and before I introduced it I bent the point almost double, as mentioned before. so that it could not catch at the posterior surface of the urethra, where I supposed the stop to be; this point of the bougie rubbed all along the anterior and upper surface of the urethra, by which means it avoided catching on the posterior surface, and it passed with great ease into the bladder. He made water by the side of the bougie, as before. He had been for some time troubled with fits of an intermittent, which at first were very irregular, but became afterwards more regular. In one of the cold fits, the bougie, being in the urethra, gave him at that time great pain, and obliged him at last to pull it out, on which he had immediate ease. The sensation was as if it stretched the passage too much, and in pulling it out it seemed to come with difficulty. This looks as if there was a contraction of the urethra, as well as of the vessels of the skin, in the cold fit, so that this disposition runs deep. By giving the bougie this bend he was able for the future to pass them with great ease. I may just observe, that by introducing the finger into the anus the prostate gland was found much enlarged.

Many patients, while labouring under any of the before-mentioned

diseases of the urethra, and sometimes even after they have been cured of them, find great pain in throwing forwards the semen; they express themselves as if it scalded. This arises from the very irritable state the muscles of this part are in, giving great pain by their own action.

I. OF THE TREATMENT OF THE SWELLED PROSTATE GLAND.

The methods practised in the above cases afforded only temporary relief; yet such must be had recourse to in order to prevent the consequences of retaining the urine too long. As a temporary relief from pain, as also to remove spasm, opiate clysters should be thrown up once or twice a day. A certain cure, I am afraid, is not yet known.

I have seen hemlock of service in several cases, which was given upon a supposition that those cases had something scrofulous in them.

I have recommended sea bathing, and have seen considerable advantages from it, and in two cases, a cure of some standing. It is upon the same principle of the scrofulous nature of the complaint that I suspect hemlock has done good.

In one case in which I was consulted, the surgeon had found the burnt sponge reduce the swelling of the gland very considerably: this medicine is also used upon the same principle. I should be inclined to try the mezereon in such cases.*

This disease, like the stricture, produces complaints in the bladder;

* In a case of a swelled prostate gland, with symptoms of an irritable bladder, in a young gentleman about twenty years of age, Mr. Earle tried a blister to the perinæum; but not finding the desired effect, and conceiving a greater irritation and discharge to be necessary, he passed a seton in the direction of the perinæum. The orifices were about two inches distant from each other. The symptoms of irritability in the bladder began to abate, and in time went entirely off. Upon examination of the prostate gland, from time to time, it was found to decrease gradually till it was nearly of the natural size. The seton was continued some months, and upon withdrawing it the symptoms began to revive again. It was advised to introduce it again, which was accordingly done, but without the former good effects.

but in this the bladder is generally more irritable, perhaps from the cause being nearer to that viscus.

Diseases of the vesiculæ seminales are very familiarly talked of, but I never saw one. In cases of very considerable induration of the prostate gland and bladder, where the surrounding parts have become very much affected, I have seen these bags also involved in the general disease; but I never saw a case where it appeared that they were primarily affected.

CHAPTER IX.

OF THE DISEASES OF THE BLADDER, PARTICULARLY FROM THE BEFOREMENTIONED OBSTRUCTIONS TO THE URINE.

All the diseases of the urethra, as also the diseases of those parts belonging to this canal, which are capable of affecting it, such as the prostate gland, I have now treated of; and shall next consider the effects of them upon the bladder; as also the diseases of that viscus, independent of affections of the urethra.

The disease of the bladder arising from obstruction alone, is increased irritability, and its consequences, by which the bladder admits of little distention, becomes quick in its action, and thick and strong in its coats. But prior to the description of the effects of the diseases of the urethra on the bladder, it will be necessary, for the better understanding of the whole, to make some remarks upon those diseases of the two parts, in which we find that each affects the other; and these I shall consider without having any regard to the cause, but only the general effects when diseased. It may be observed, that every organ in an animal body is made up of different parts, whose functions or actions are totally different from each other, although all tend to produce one ultimate effect. In most, if not in all, when perfect, there is a succession of motions, one naturally arising out of the other, which in the end produces the ultimate effect; and an irregularity alone in these actions will constitute disease, at least produce very disagreeable effects, and often totally frustrate the final intention of the organs.

I may be allowed also to premise, that the natural width of the urethra gives such a resistance to the force or power of the bladder in expelling the urine, as is easily overcome by the natural action of the bladder; but when the canal is lessened, either by stricture, spasm,

swelled prostate gland, or any other means, this proportion is lost, by which means the bladder finds greater difficulty than natural, and is of course thrown into an increased action to overcome the resistance, which becomes a cause of the irritability and increased strength of this viscus in such diseases.

It is to be understood, that in a sound state of these two parts, the bladder and urethra, the contraction of the one produces a relaxation of the other, and vice versa; so that their natural actions are alternate, and they may be considered as antagonist muscles to one another. Thus when the stimulus of expulsion of the urine takes place in the bladder, which immediately produces contractions in it, the urethra relaxes, by which means the urine is expelled from the bladder and allowed to pass through the urethra; and when the action ceases in the bladder, the urethra contracts again like a sphincter muscle,* for the purpose of retaining the urine which flows into the bladder from the kidneys, till it gives the stimulus for expulsion again.

But in many diseases of these two parts this necessary alternate action is not regularly kept up, the one not obeying the summons of the other. This irregularity arises perhaps oftner from disease in the urethra, than in the bladder; for the action of the urethra depends upon the actions of the bladder; and if it is not disposed to obey the notices of the bladder, then there must be an irregularity as to time, which produces very troublesome symptoms.

We find in many diseases of the urethra, such as strictures and spasms, as also in diseases of certain parts belonging to this canal, such as the prostate, and Cowper's glands, that there is a greater disposition in this canal for contraction, than common, so that when the bladder has begun to act, the water is not allowed to flow, the urethra not immediately relaxing; and the moment such a symptom takes place,

* It may be remarked, that many sphincter muscles have two causes of action; one which may be called involuntary, depending on the natural uses and actions of the parts; the other is voluntary, where a greater degree of action can be produced by the command of the will: and when a diseased action takes place, it is probably of this voluntary action, for it is an increased action over the natural, which the voluntary is.

every other power takes the alarm, and is brought in to assist the bladder, such as straining violently with the abdominal muscles, and muscles of respiration, from all which there is violent pain in the parts immediately concerned, especially in the glans penis. A gentleman, whose bladder was in an irritable state, found that by passing a bougie a little way into the urethra, the irritation was taken off from the bladder, and he could retain the urine several hours.

This disease has different degrees of violence. When slight, the distance in time between the contraction of the bladder, and the relaxation of the urethra is but short, only giving a momentary pain and straining, and the urethra relaxes, and the water flows according to the dilatation of the urethra, which in many of these cases is but very small. In others the distance of time is very long, many straining for a considerable time before a drop will come; and what does come is often only in drops; and sometimes before the whole urine can be expelled in this way, the spasm of the urethra comes on again, and there is a full stop, which gives excruciating pain for a while; but at last the bladder is as it were tired, and ceases to act. But as the urine in such cases is seldom all discharged, and often but a very little of it, the symptoms soon recur; and in this way, with a call to make water perhaps every hour out of the four and twenty, the patient drags on a miserable life.

The bladder, in all cases of obstruction, whether constant, as in the permanent stricture, or swelled prostate gland, or only temporary, as in the spasmodic stricture, is generally kept distended, but much more so in the permanent stricture: and when the irritation of fulness comes on, which is very frequent, the contraction of that viscus becomes violent, in proportion to the resistance: the sympathetic contraction of the muscles of the abdomen takes place, and is also violent, yet the water at such times shall only dribble, and be discharged in small quantity; and in the spasmodic stricture often not a drop shall pass, so that the bladder is never entirely empty; and what does pass is no more than what is sufficient to take off the irritation of fulness; by which means these actions become more frequent, and consequently there is almost always a constant oozing of urine from the penis between the times of making

water. This however is not always the case, for the bladder sometimes is so irritable as not to cease acting till it has evacuated the whole water; and even then it is not at ease, but still strains, though there is nothing to throw out, the action of the bladder becoming a cause of its own continuance.

In all such affections of the bladder there is a sensation of pain and itching combined in the glans penis. In diseases of the bladder, the constitution is sooner affected by symptoms of dissolution, than from the same apparent degree of disease in other parts, the patient becomes drowsy, insensible, and soon dies.

If the symptoms are more urgent than a stricture or disease of the prostate gland will well account for, a stone is to be suspected.

I. OF THE TREATMENT WHERE THE ACTIONS OF THE URETHRA AND BLADDER DO NOT EXACTLY ALTERNATE.

The cure where the disease arises from spasm alone, consists in removing the disposition to over-action in the urethra, and the irritable disposition of the bladder when the urethra does not obey it. Perhaps opiate clysters as a temporary relief, are the very best; I have known a blister to the loins, or to the perinæum remove the spasm in a great measure from the urethra.

When the circumstance of the ultimate actions of these parts not being regular arises from stricture, swelled prostate gland, or any mechanical obstruction to the urine, then that cause must be removed, as has been fully described in the treatment of these diseases.

II. OF THE PARALYSIS OF THE BLADDER FROM OBSTRUCTION TO THE PASSAGE OF THE URINE.

We may observe that the bladder is a part easily deprived of its power of contraction, for we find in many debilitating diseases and long illnesses from any cause, as fever, gout, and considerable local diseases

which debilitate, that the bladder often becomes paralytic, and the water must be drawn off. We may also observe, when the bladder has been distended considerably, from whatever cause, so as to have its contractile power destroyed, that there is a considerable extravasation of blood from the inner surface of the bladder, so that the water which is evacuated is often extremely bloody. I have seen in cases where the patient has died with this obstruction upon him, that the inner membrane of the bladder has been almost black, being loaded with extravasated blood, but this symptom of bloody urine goes off; as the bladder acquires again its powers of action.

In the diseases of the urethra, before described, when not properly attended to, and in cases of stricture, where nature has not been able to relieve herself, the water must of course be retained in the bladder, which is perhaps always productive of another disease, that is, the loss of the power of contraction of that viscus. Although this one effect, the retention of urine, arises from very different causes, as before related, yet immediate relief must be given in all of them, which can only be effected by the evacuation of the water. According to the nature of the obstruction, the mode of evacuation will be different, and will be of two kinds, one by the natural passage by means of an hollow tube, the other by an artificial opening made into the bladder.

If the causes of suppression are either spasmodic affections of the urethra, a swelled prostate gland, inflammation in the surrounding parts of the urethra, or tumors pressing upon it, as happens in pregnant women, immediate relief may be procured by means of a catheter, because under such circumstances a catheter will most probably pass, the sides of the canal being merely forced together by spasm, or external pressure.

A bougie, although it will also pass under such circumstances will not answer so well, because a bougie must be withdrawn before the water can flow, which will allow the cause of the obstruction to have again its full force; and if the spasm should not now exist, yet the bougie will not answer, unless there be a power of action in the bladder;

for it is with difficulty the urine can be made to pass through the urethra, by pressing the abdomen only.

When the catheter is passed, it will be necessary to make the patient strain with his abdominal muscles, as also with his muscles of respiration, to squeeze out the water, the bladder having no power of contraction, and even this will not be sufficient, for it will be necessary to press on the region of the pubis with the hand to make the water flow.

In cases where there is a considerable degree of debility in the bladder, or in those cases where there is a considerable strangury and of long standing, and where a small quantity of urine in the bladder gives the stimulus of fulness to that viscus, which is always attended with considerable urgency to make water; and where only very small quantities are evacuated; the bladder not being emptied at each time of making it, and when a catheter either rigid or flexible can with readiness be passed, the question is, what is the best way upon the whole to evacuate the water? There are three ways in which it can be done: one, by allowing the parts to do their own business as much as they can, and this at first sight might be supposed to be the very best, but it is in some cases the very worst; for the frequency of the inclination to make water, arising from the water not being wholly evacuated each time, the evacuation not readily taking place, increases the effort, and for a few minutes produces excruciating pain, keeping up a considerable and almost constant irritation in all those parts, which few can bear. Another method is, to draw off the water each time with a catheter, but this in many cases is next to impracticable; for supposing the operation to be performed only twice or three times in the day, we shall find that this is oftener than what should be done. The third method is, to leave the catheter almost constantly in the bladder.

Which of these three methods gives on the whole the least irritation must depend upon circumstances attending different cases. Where the frequency and the urgency is great, and the flowing of the water difficult, either the second or the third is to be pursued; and when the

symptoms are such that a catheter must be passed very often, I believe it had better be left in, only taking it out occasionally: I think this is supported by observation and experience.

It sometimes happens in cases of swelled prostate gland, that the catheter cannot be passed without the utmost difficulty, and when this has been the case I have left it in the bladder, for fear of not being able to pass it again, and continued it there till the bladder has sufficiently recovered its tone, which is known by its being able to throw the urine through the catheter; after which that instrument may be withdrawn.

If the spasm, in such cases, as arise from that cause, should still continue after the bladder has recovered its tone, we must continue the use of the catheter. But it often happens that the spasm leaves the urethra before the bladder recovers its power of contraction, the disease becoming then simply a paralysis of that viscus.

One of the first symptoms of the bladder beginning to regain its power of contraction is, the sensation of fulness, or an inclination to make water, and when that sensation comes on, the patient should be allowed to make water, but not to force it, for that circumstance alone will bring on the spasm if the urethra is not very ready to dilate. I have seen however in some cases, that a slight sensation is not altogether to be depended upon, for it required a little retention more effectually to stimulate the bladder to action, and then the water has passed more freely.

The spasmodic contraction of the urethra does not appear to give up its action simply upon the stimulus or inclination to make water, and not till the bladder begins to have the power of contraction; for in cases where the bladder is paralytic, and yet sensible of the stimulus arising from being full, as it does not contract, the urethra does not relax, and the water cannot be made to pass.

It would appear that as the bladder recovers of the paralysis it is not able to contain so much water as usual, therefore the patients are obliged to make water often, and of course in small quantities.

III. OF THE CURE OF THE PARALYSIS OF THE BLADDER, FROM OBSTRUCTION ARISING FROM PRESSURE OR SPASM.

The removal of the causes of the paralysis of the bladder was fully described when we were treating of the diseases, which produce that complaint, and the immediate relief, when the bladder is rendered inactive, has just now been considered; the paralysis itself is therefore the only remaining thing to be attended to. In this disease there are often contrary indications of cure, for a spasm is very different from a paralysis; and if the suppression is from spasm, and that still continues, then what may be good for the paralysis, may be bad for the spasm. As in such cases the water can be drawn off, the bladder should be first attended to. Stimulants and strengtheners are useful; blisters to the loins to rouze the bladder to action, and blisters to the perinæum, to take off the spasm from the urethra, often succeed. Electricity is sometimes of singular service, when applied in such cases to the perinæum. Through the whole of the cure the urine must be drawn off frequently, because the bladder should not be allowed to be distended, which otherwise would be the consequence; and the sensation arising from the distention of that viscus is a very oppressive one.

A gentleman was at times attacked with a difficulty in making water, which he paid no attention to, as it had always gone off; but at last he was taken so bad as to be obliged to have recourse to the catheter, which afforded only a temporary relief. The spasm continued, and I was sent for; when I passed the catheter, I was obliged to press the lower part of the abdomen to squeeze out the water, for the bladder appeared to give but little assistance. I ordered a blister to the loins which gave some power of contraction to the bladder, and took off some of the spasm in the urethra, but still he was very little relieved; I then directed a blister to be applied to the perinæum, which immediately removed his complaint.

CHAPTER X.

OF A SUPPRESSION OF URINE—AND OPERATIONS FOR THE CURE OF IT.

In cases of total suppression of urine arising from strictures or other causes, where a catheter cannot be passed, and where every other method recommended is impracticable, an artificial opening must be made into the bladder for the evacuation of the water. There are three places where this opening may be made, and each has had its advocates. This operation has not been considered in all its circumstances, in different patients, so as to direct the young surgeon in the variety of cases, that may occur; for under some circumstances the operation is more advisable in one place than another; and, indeed, it may sometimes be next to impossible to perform it in a particular part.

The opening may be made first, in the perinæum, where we now cut for a stone; secondly, above the pubis, where cutting for the stone was formerly practised; and, thirdly, from within the rectum, where the bladder lies in contact with the gut.

The first question, which naturally occurs, is, which of those situations is the most proper for the safety of the patient, the evacuation of the water, and the conveniency of operating, when no particular circumstance forbids either of the situations?

On the first view of the subject, one would be apt to prefer that above the pubis, or from the rectum, as the bladder is nearer to either, and the parts more adapted to an operation, than from the perinæum, where we must cut at random. These two situations, although the most proper in this respect, under certain circumstances, yet may become the most improper, for they are subject to greater changes than the perinæum.

The reasons that may render it very improper above the pubis are,

the persons being very fat, or the bladder's not distending sufficiently so as to rise above the pubis, which is common enough in diseases of those parts.

In very fat people it will be found that the substance to be cut through may be three or four inches, which will not only make the operation very unpleasant, but often improper; for such thickness of parts will make the swell of the bladder very obscure and uncertain; in many of those cases of obstruction of the bladder being so diseased as to allow of but little distention; and in such the symptoms of distention come on very early, perhaps where there is only a few ounces of water collected. But if the retention has been for some considerable time, as twenty-four hours, then we may suppose that the bladder has allowed of distention to a much greater degree, which may in some cases be ascertained by introducing the finger into the rectum.

But, where the bladder distends, and the parts are so thin that it can be plainly felt above the pubis, I see no material objection to this situation; and it has this advantage over the operation by the rectum, that a catheter can more easily be introduced, and kept in, which will be necessary to be done till the cause is removed.

It may be necessary here to mention some precautions respecting the keeping the instrument in the bladder; as also the best kind to be used. It must be a hollow tube, and should reach as far as the posterior surface of the bladder; for upon the contraction of that viscus, its anterior part recedes backwards and downwards from the abdomen towards its fixed point, which may draw the bladder off from the tube. But as the distance between the skin of the abdomen and posterior surface of the bladder cannot be exactly ascertained, the canula may be either too long, or too short; if too long, its end may press upon the posterior surface of the bladder and produce ulceration there, and in time work its way into the rectum. To avoid this mischief, as also the inconveniences arising from its being too short, and the bladder slipping off from its end, I would recommend the tube to be made with a curve, and to lie with its convex side on the posterior part of the bladder, which being a large surface, and following nearly the same curve as the canula, less mischief

is to be expected. The openings into the canula may be made on the concave side.

Probably it might be attended with more safety, as also ease to the patient, to have the curved end of the catheter introduced into the urethra from the bladder. The passing of it into the urethra is very practicable, and we know that such a body lying in the urethra is not productive of any mischief. A common catheter passed in this way enters so far, as to bring the handle almost flat to the belly; at most only a little bolster between the catheter and belly is necessary, and then with a piece of tape fixed to the handle of the catheter it might be fastened to the body, or a short catheter might be made with ears to fix the tape to.* In cases where the canula has remained in some time, the artificial passage will become in some degree permanent, so that it may be taken out occasionally, and cleaned from any stony matter that may be attached to it. To avoid this part of the operation it has been recommended to have two canulas, one within the other, that by drawing out the inner it might be cleaned, and again introduced; but in most cases it will also be necessary to withdraw the outer one, as its external surface will contract a crust.

The second method, or puncture by the anus, will more commonly admit of being performed than that above the pubis; for it does not require that distention of bladder which the other does, therefore is not so often impracticable from that cause; and perhaps the only obstacle here is a swelled prostate gland. In many of these cases of diseases of the urethra, the prostate gland is very much swelled, which I can conceive may make the proper place for the puncture very uncertain; for the prostate gland in such cases will be pressed down towards the anus, before the bladder, and will be the first thing felt by the finger. Care must

* Where this operation is performed in consequence of a stricture, I have conceived that by passing a catheter into the urethra from the bladder till it came to the stricture, and then passing another straight canula from the glans down the urethra, that the two might nearly meet, only having the stricture between them; and a piercer might be passed down and forced into the end of the one from the bladder, and afterwards either a bougie or hollow catheter introduced.

therefore be taken to distinguish the one from the other, which can only be done by getting the finger beyond the prostate gland, which may not be practicable; and if practicable, it may not be an easy matter to distinguish the one from the other, as a thickened and distended bladder may seem to be a continuation of the same tumor. However, if the objections given to the performing of it above the pubis exist, I should prefer operating by the rectum; for although the probability of succeeding here may not be apparently greater than above the pubis, yet the chances are in its favour.

I must however observe here, that the objections which I have started, are only raised in my own mind from my knowledge of the diseases of those parts, and not from cases of suppression of urine under all the beforementioned circumstances having occurred to me in practice.

A case of a total suppression of urine arising from stricture, where no instrument could be passed by the natural passage, and where a puncture was made into the bladder, from the rectum, with success, is related in the Philosophical Transactions, by Dr. Hamilton, of King's Lynn, in Norfolk.*

What led Dr. Hamilton to do it here, was a difficulty which was found in passing the clyster-pipe into the rectum, which induced him to introduce his finger into the anus, and he found the bladder so prominent in the rectum as to give the hint of performing the operation there.

The man was put into the same position as in the operation for the stone, and a trochar was introduced upon the finger into the anus, and thrust into the lower and most prominent part of the tumor, in the direction of the axis of the bladder, and upon withdrawing the piercer the water flowed out through the canula.

A straight catheter was then introduced through the canula, least the orifice in the bladder should be drawn off from the canula.

Then the canula was pulled out over the catheter, which was left in till the whole water was evacuated, and was then withdrawn.

The bladder, notwithstanding this perforation, retained the water as usual, till the inclination to make it came on; and when he performed

* Philosophical Transactions for the year 1776, Vol. lxvi. p. 578.

the action of making water, the orifice in the bladder seemed to open, and it rushed out by the anus. This continued about two days, when the water began to find its natural passage, and a bougie was introduced into the bladder, through the urethra, which gave a free passage for the water, and of course less came by the anus; so that on the sixth day after the operation the whole came by the natural passage. The man continued the use of the bougie till the stricture was dilated.

Dr. Hamilton further remarks, that in those cases of suppression of urine, in general, he has found that calomel and opium, in large doses, answer better than any thing he has tried.

He is convinced from repeated trials, that the specific efficacy is in the calomel, as large doses of opium alone have proved ineffectual; but he does not say that calomel alone will answer. He orders ten grains of calomel with two of opium, to be repeated in six hours if it has not answered in that time; and he says he has seldom been obliged to give a third dose.

This method of tapping the bladder was firt s uggested by Monsieur Fleurant, surgeon to the Charité, at Lyons, in the year 1750. The operation was performed at that time, and an account of it was afterwards published by M. Pouteau, in 1760, with the history of three cases, in all which the operation was performed by M. Fleurant. The propriety of performing the operation in this part occurred to him in a manner similar to that before related of Dr. Hamilton; for in introducing the finger into the rectum to examine the state of the bladder in a case where he was going to puncture in the perinæum, he found the bladder so prominent there, and so much within the reach of his instrument, that he immediately altered his intention, and performed it in this part. He very readily drew off the water, and kept the canula in, with a T bandage, till the urine came the right way, and then withdrew it, and all terminated well. But there was a good deal of trouble on account of the canula being left in on going to stool, as also from the constant dribbling of the water through it, all of which was prevented in Dr. Hamilton's case, by removing the canula immediately upon the evacuation of the water. This was productive of another good effect, which was the

retention of the urine till the stimulus of fullness was given, and then it passed through the artificial as it would through a natural passage. Should this be a constant effect in consequence of performing the operation here, I think it must be owned to be an unexpected circumstance, which at first could not have been imagined.*

In another patient of M. Fleurant's, the canula was kept in the anus and bladder thirty-nine days, without any inconvenience; so that the objection to this part of the operation cannot be material.

Pouteau mentions one case where he performed this operation, in the year 1752, and the man died.+

He says, I was called to visit a poor man suffering under a retention of urine, so obstinate and violent that it had already the symptoms of what is called a reflux of urine into the blood; and the complaint had continued more than three days. An empiric, to whose care he had been entrusted, after having very improperly given him the most powerful diuretics, had likewise the rashness to search him. It appears probable that these attempts, which were made without success, must have increased the mischief. A catheter could not be passed into such parts by unskilful hands, without increasing the inflammation. I only made three slight efforts to effect a passage into the bladder by the urethra, which appeared to be much diseased, as well by the effusion of blood, as the extreme pain these attempts produced. I determined at once to do as before, and plunged my trochar by the rectum into the bladder. The success was exactly the same; the bladder was entirely emptied, and I allowed the canula to remain there a whole night and a day, during which time the urine flowed without intermission. Every thing went on without any accident, which could be supposed connected with the operation; and death, which happened next day, was entirely independent of it.

One must suppose with Pouteau, that the death of the patient could not have arisen from this operation, but from the preceding diseases.

* A history, with a description of this operation, is published by Mr. Reid, surgeon, of Chelsea, in 1778.

+ Pouteau Mélanges de Chirurgie, printed at Lyons, 1760, page 506, 507, and 508.

The bags called vesiculæ seminales, and the hæmorrhoidal vessels have been mentioned as parts in danger of being wounded in the operation, and thereby proving troublesome; but if either of them were wounded, no inconvenience could arise. To avoid the vesiculæ seminales, it is recommended to perforate high up, and directly in the middle of the bladder, between the two sides, and this situation is at the same time the one where the hæmorrhoidal vessels are the smallest, and therefore it is of less consequence if they are wounded.

It must appear from the following cases sent me by different gentlemen that a communication being kept up between the bladder and rectum, is only inconvenient, and not so much so as might be expected.

" With respect to the sailor, who passed his urine by the rectum, I have examined the few papers by me, but cannot find the particular remarks I made; however, as the case was singular, I recollect the man told me, that a few years before, (this was at the Madras hospital, in December 1779) he had the venereal disease, very bad, and long; that the urine came by the anus, but this passage healed up, and it came by the penis, and continued to do so till he caught the disease again, when the urine found its way a second time by the anus, and came that way for years. When he first came under my care, in the hospital at Bombay, February 1779, he felt no uneasiness or inconvenience from this manner of passing his urine; whenever he had an inclination to make water he sat down. I often made him lie upon his breast, with his legs drawn up, and the stream came through the anus with great force."

John Conway, a seaman belonging to the St. Antonia, was admitted into Haslar hospital on the 24th of November, 1770, for the lues venerea. Besides the usual symptoms of that disease, he had a communication between the bladder and rectum; which had continued four months. When he endeavoured to make water, the water flowed both from the urethra and anus, coming from the anus in a small stream, often to the quantity of a pint. It also flowed freely from the anus when he went to stool, although none was voided by the urethra. In the beginning of the complaint some portions of dead flesh, he said, had

come away from the rectum, but when admitted into the hospital, there was not any soreness remaining, or discharge of matter from it, and the urine passed without pain; externally he never had any fistula penetrating either into the bladder, or rectum, and when disturbed with flatulence in the bowels, did not perceive any wind to escape from the urethra.

In other cases, in consequence of abscesses forming between the bladder and rectum, where they have not healed up, there has been a reciprocal passing of the contents of these cavities from the one to the other.

It only remains to speak of the puncture in the perinæum. An obstruction to the urine taking place in the natural passage prevents us from introducing an instrument in most of those cases, and deprives us of all the advantages we could receive from it as a guide in the operation; yet there may be cases of stricture, where by cutting into the urethra, beyond the stricture, the water will flow; but this must be done without any guide or direction, and requires a nice and accurate knowledge of the parts; or if the obstruction arises from the valvular projection of the prostate gland, a staff may be passed as far as this projection, and cut upon as for the stone, only making a smaller incision, using a small gorget, or in the room of that, a trochar of a particular form might be run along it into the bladder; for, although the staff does not enter the bladder, yet, the distance to pass through without this guide is but small. If this cannot be done, a small and deep incision may be made in the perinæum, with an imposthume lancet, towards the bladder; the point of the trochar is to be introduced by this, passing at the same time the fore finger of the other hand into the anus, which will be a guide both for the direction of the instrument, as also to avoid its point passing into the rectum; with these precautions the error cannot be great.

I must own however, that I have not seen cases enough to enable me to give all the varieties that commonly happen, and of course to give all the advantages and disadvantages of each method.

I. OF ALLOWING A CATHETER TO REMAIN IN THE URETHRA AND BLADDER.

In cases of debility of the bladder, and where a catheter passes with difficulty, or with great uncertainty, and in cases where it must be used frequently and for a length of time, it will be necessary to keep an instrument in the urethra and bladder, so as to allow the water to pass through it freely. A common catheter, or one made of the elastic gum, are perhaps the best instruments of any; but they must be fixed in the canal; this will be best done by the outer end of the catheter being tied to some external body, as I shall now describe. When the catheter is fairly in the bladder, the outer end is rather inclined downwards, nearly in a line with the body; take the common strap or belt part of a bag truss, and have two thigh straps either fixed to it or hooked to it; let a strap come round each thigh and forwards by each side of the scrotum, to be fastened to the belt where the ears of the bag are usually fixed. Have a small ring or two fixed to each strap just where it passes the scrotum or root of the penis; then take a piece of small tape, and fix the ends of the catheter to those rings, which will keep it in the bladder. A bit of rag about four or five inches long, with a hole at the end of it, passed over the exterior end of the catheter, and the loose end allowed to hang in a bason, placed between the thighs, will catch the water which cannot disengage itself from the catheter, and keep the patient dry; or if another curved pipe is introduced into the catheter it will answer equally well.

Under such treatment the bladder will never be allowed to be distended; and when the patient wants to have the bladder in some degree emptied, he has only to strain with his abdominal muscles, by which means he will be able to throw out a great deal at each time.

As the bladder begins to recover its actions, the patient will find that an inclination to make water will come on, and at those times he will also find that the water will come from him without straining with the abdominal muscles; when this takes place readily the catheter may be

taken out, and it will be found that he will be able in future to make water of himself. If it is necessary to keep in the catheter a considerable time, it will be the cause of a great deal of slime and mucus being formed in the urethra and bladder; but I believe this is of no consequence. I have known a catheter kept in this way for five months without any inconvenience whatever.

In all cases where it is necessary to keep an extraneous body for a considerable time in the bladder, whether in an artificial passage or the natural one, it will be proper, a few days after its first introduction, to withdraw it, and examine whether it is incrusting, or filling up in its cavity with the calculous matter of the urine; if after remaining in the bladder for some days it has contracted none, we need be under no apprehension of its doing it; but if, as frequently happens, it should have a considerable quantity collected, then it will be necessary to have it occasionally withdrawn and cleaned; the best method probably of doing this is to put it in vinegar, which will soon dissolve the stony matter.

II. OF THE INCREASED STRENGTH OF THE BLADDER.

The bladder in such cases as before described, having more to do than common, is almost in a constant state of irritation and action; by which, according to a property in all muscles, it becomes stronger and stronger in its muscular coats; and I suspect, that this disposition to become stronger from repeated action, is greater in the involuntary muscles than the voluntary; and the reason why it should be so is I think very evident; for in the involuntary muscles the power should be in all cases capable of overcoming the resistance, as the power is always performing some natural and necessary action; for whenever a disease produces an uncommon resistance in the involuntary parts, if the power is not proportionably increased the disease becomes very formidable; whereas in the voluntary muscles there is not that necessity, because the will can stop whenever the muscles cannot follow; and if the will

is so diseased as not to stop, the power in voluntary muscles should not increase in proportion.

I have seen the muscular coats of the bladder near half an inch thick, and the fasciculi so strong as to form ridges on the inside of that cavity;* and I have also seen the fasciculi very thin, and even wanting in some parts of the bladder, so that a hernia of the internal coat had taken place between the fasciculi, and formed pouches.† These pouches arise from the thin parts not being able to support the actions of the strong; as happens in ruptures at the navel, or rings of the abdomen.

III. OF THE DISTENTION OF THE URETERS.

It sometimes happens that the irritation from the distention of the bladder, and the difficulty in throwing out its contents, is so great, that the urine is prevented from flowing freely into that viscus from the ureters, which become thereby preternaturally distended. The pelvis of the kidneys, and infundibula are also enlarged; but how far this dilatation of the ureters and pelvis is really owing to a mechanical cause I am not so clear; or whether it is not a disposition for dilatation arising out of the stimulus given by the bladder. In some cases of long standing, where the bladder was become very thick, and had been for a long time acting with great violence, it had affected the mamillæ, so that the surface of these processes produced a matter, and perhaps even the secreting organs of the kidneys, so that the urine secreted was accompanied with a pus, arising from the irritation being kept up in all these parts.

* This appearance was long supposed to have arisen from a disease of this viscus; but upon examination I found that the muscular parts were sound and distinct; that they were only increased in bulk in proportion to the power they had to exert; and that it was not a consequence of inflammation, for in that case parts are blended into one indistinct mass.

† This is perhaps the cause of the stone being often found in a pouch formed in the bladder; for the bladder in cases of stone is often very strong, which arises from the violent contraction of that viscus caused by the irritation of the stone on the sides of it; and also from the stone being often opposed to the mouth of the urethra in the time of making water.

The urine in the above cases is generally stale, even before it is thrown out of the bladder, which when joined with the circumstance of the linen being constantly kept wet, by the almost continual discharge of urine, (which of itself would produce a staleness of urine, in these parts) becomes very offensive, and it is hardly possible to keep the patient sweet.

IV. OF IRRITABILITY IN THE BLADDER INDEPENDENT OF OBSTRUCTIONS TO THE PASSAGE OF THE URINE.

Another disease of the bladder, connected with our present subject is, where that viscus becomes extremely irritable, and will not allow of its usual distention. The symptoms of this disease are very similar to those arising from obstructions to the passage of the urine in the urethra, but with this difference, that in the present disease the urine flows readily, because the urethra obeys the summons and relaxes; however there is often considerable straining, after the water is all made, arising from the muscular coat of the bladder still continuing its contractions.

This irritability of the bladder often arises from local causes, as a stone, cancer, or tumors forming on the inside, all of which produce irritability of this viscus. In such cases, the straining is violent, for the cause still remains which continues to give the stimulus of something to be expelled, and the bladder continues to contract till tired, as in the cases of simple irritability; and then there is a respite for a time, but this respite is of a short duration, for the urine is soon accumulated.

This disease will kill in the end, by producing wasting and hectic fever.

V. OF THE CURE OF SIMPLE IRRITABILITY OF THE BLADDER.

When the symptoms arise from irritability alone, and not from a stone, or any local affection, the nature of the complaint may not at first be so obvious; temporary relief may however be procured by opium, which

is most effectual in slight and recent cases; and if it be applied as near to the part as possible, its effects will be more evident; and therefore it may be given by clyster as well as by the mouth. I have known alum whey given, under which treatment the patient got well.

I should however be inclined to rely more on a blister applied to the perinæum, than any other method of cure; or to the lower part of the small of the back, or upper part of the sacrum, if more convenient.

In all cases where there is an irritation of the bladder, the patient should never endeavour to retain his water beyond the inclination to make it. It hurts the bladder and increases its irritability; and indeed I am apt to think that this circumstance even in sound parts, is often a predisposing cause of disease in this viscus and its appendage, the urethra; for I have known several cases where it has brought on the spasmodic stricture in the urethra, in sound parts; and it is frequently an immediate cause of strangury in those who have either a stricture or a disposition to spasms in those parts.

A gentleman in perfect health, from retaining his urine beyond the inclination in the play-house, had all the symptoms of an irritable bladder brought on, and continued for several years, rendering him miserable.

VI. OF A PARALYSIS OF THE ACCELERATORES MUSCLES.

In many irritations of the bladder, the urethra not only relaxes directly on the stimulus to make water being felt in that viscus, as has been described, but a paralysis sometimes takes place in the voluntary muscles of those parts, so that the will cannot command them to contract to hinder the inconveniences that may attend an immediate evacuation of that fluid. If we attempt to stop the water, which is an act of the will, we cannot, the acceleratores muscles will not obey, and the water flows.

A blister applied to the perinæum will have considerable effects in removing this complaint.

CHAPTER XI.

OF THE DISCHARGE OF THE NATURAL MUCUS OF THE GLANDS OF THE URETHRA.

The small glands of the urethra, and Cowper's glands, secrete a slimy mucus similar to the white of an egg not coagulated. This seldom appears externally, or flows from the urethra, but during the indulgence of lascivious thoughts, and is seldom or never attended to, excepting by those who are under apprehensions either of a gonorrhœa coming on, or imagine the last infection is not gone off entirely, and such patients are kept in constant terror by this natural discharge. They often find it in such quantity as to leave spots on the shirt, but without colour; and often after toying, the lips of the urethra are it were glewed together by it, from its drying there, which appearances alarm the mind of the patient without cause. Although this is only a natural discharge, and is now secreted under the same influence which naturally produces it, it must at the same time be owned, that it is commonly much encreased in those cases of debility arising from the mind, which is probably not easily to be accounted for; it would seem that the contest between the mind and the body increases this secretion, for it cannot be considered as a disease of the parts.

I. OF THE DISCHARGE OF THE SECRETIONS OF THE PROSTATE GLAND AND VESICULÆ SEMINALES.

This complaint is imagined to be the consequence of the venereal disease in the urethra; but how far this is really the case is not certain; though most probably it is not. It is a discharge of mucus by the urethra, which generally comes away with the last drops of urine, espe-

cially if the bladder is irritable; and still more at the time of being at stool, particularly if the patient be costive; for, under such circumstances, the straining or actions of the muscles of those parts are more violent. It has generally been supposed that this discharge is semen, and it is the disease called a seminal weakness; but it appears from many experiments and observations, that the discharge is undoubtedly not semen. It is only the mucus secreted either by the prostate gland, by those bags improperly called vesiculæ seminales, or both; and it may not be improper to give here the distinguishing marks between these two fluids. First; I may observe the discharge in question is not of the same colour with the semen, and is exactly of the colour of the mucus of the prostate gland, and of those bags. It has not the same smell, and indeed it hardly has any smell at all. The quantity evacuated at one time is often much more considerable than the evacuation of semen ever is; and it happens more frequently than it could possibly do were the discharge semen. It is a disease that often attacks old men, where one can hardly suppose much semen to be secreted; and we find that those who are affected with this disease, are no more deficient in the secretion and evacuation of the semen in the natural way, than before they had the disease. If the mind be at ease, this shall take place immediately after a discharge of this fluid, as well as before, which could not be the case were it semen. Further; if those that labour under this complaint are not connected with women, they are subject to nocturnal discharges from the imagination, as persons who are perfectly sound; and indeed most patients, when made acquainted with these circumstances, become very sensible that it is not the semen.

A gentleman has often a discharge of mucus from the urethra with the last drops of urine, and when he goes to stool, but after having connection with women it does not take place.

It is not clear what the diseased state of the parts is upon which this discharge depends, whether there is a larger secretion of this mucus than natural, or whether it is entirely owing to a preternatural, uncommon action of those parts; and if this last, why these parts should be put into action when the bladder, rectum, and abdominal muscles are thrown

into action to expel their contents, is not easily explained. It is plain that the most violent actions of these parts are necessary to produce this evacuation; for it does not come with the first of the urine, nor in general when they go with ease to stool.

As it was thought to be a seminal discharge, it was imagined to arise from a weakness in the organs of generation; and as frequent discharges of the semen in the natural way generally weaken, it was therefore imagined that this discharge must also weaken very considerably; and the imagination will operate so strongly as to make the patients believe they really are weakened. Whether the cause of such a discharge is capable of weakening, I will not pretend to say; but I believe that the discharge simply does not. Fear, and anxiety of mind, may really weaken the patient. In the cases I have seen of this kind, the mind has been more affected than the body.

From my own practice, I can hardly recommend any one medicine, or way of life, for removing this complaint. In one case I found considerable benefit from giving hemlock internally.

The idea that has been formed of the disease leads to the practice generally used and recommended, such as giving strengthening medicines of all kinds, as bark, &c. but I never saw any good effects from any of them; and I should rather be inclined to take up the soothing plan to prevent all violent actions. Keeping the body gently open will in some degree moderate the discharge, and probably may effect a cure in the end.

CHAPTER XII.

OF IMPOTENCE.

This complaint is by many laid to the charge of Onanism at an early age; but how far this is just, it will in many cases be difficult to determine.

How far the attributing to this practice such a consequence, is of public utility, I am doubtful, particularly as it is followed most commonly at an age, when consequences are not sufficiently attended to, even in things less gratifying to the senses; but this I can say with certainty, that many of those, who are affected with the complaints in question are miserable from this idea; and it is some consolation for them to know that it is possible it may arise from other causes. I am clear in my own mind that the books on this subject have done more harm than good. I think I may affirm that this act in itself does less harm to the constitution in general than the natural. That the natural with common women, or such as we are indifferent about, does less harm to the constitution than where it is not so selfish, and where the affections for the woman are also concerned. Where it is only a constitutional act it is simple, and only one action takes place; but where the mind becomes interested, it is worked up to a degree of enthusiasm, increasing the sensibility of the body and disposition for action; and when the complete action takes place it is with proportional violence; and in proportion to the violence is the degree of debility produced, or injury done to the constitution.

In the cases of this kind that have come under my care, although the persons themselves have been very ready to suppose that the disease arose from the cause here alluded to; yet they did not appear to have given more into the practice than common; and in particular, the worst

case I have ever seen was where but very little of this practice had ever been used, which is particularly pernicious from the frequency of the repetition, there being no want of opportunity.

Nothing hurts the mind of a man so much as the idea of inability to perform well the duty of the sex. If his scrotum hangs low it makes him miserable; he conceives immediately that he is to be rendered incapable of performing those acts in which he prides himself most. It is certain that the relaxation, or contraction of the scrotum, is in some degree a kind of sign of the constitution; but it is of the constitution at large, not of those parts in particular. Nurses are so sensible of the contraction of that part being a sign of health in the children under their care, that they take notice of it. The relaxation of it in them cannot be supposed to arise from inability to perform those acts at one time more than another. The face is one of the signs of the constitution, and has as much to do with those peculiar acts as the scrotum. However we must allow that this part is much more lax than what we should conceive was intended by nature, even in young men who are well in health; but as this is very general, I rather suspect that it arises from the circumstances of the part being kept too warm, and always suspended, the muscles hardly ever being allowed to act, so that they have less force. How far it is the same in those countries whose dress does not immediately suspend those parts, I have not been able to ascertain. Warmth appears to be one cause, for we find that cold has always an immediate effect; but this is perhaps owing to its not being accustomed to cold. What the difference is in this part, in a cold and warm climate, all other circumstances the same, I do not know. But whatever may be the cause, if it is really in common more lax than intended by nature, it is of no consequence as to the powers of generation. The testicles will secrete whether kept high or low.

The Editor is induced to believe that Onanism is more hurtful than the author imagined; that its being practised before the parts have arrived at maturity in weakly constitutions, may prevent their ever doing so. He also believes, contrary to the opinion of the author, that the

venereal act with a woman, where the passions are strongly excited, can be more frequently repeated with less debilitating effects, than under any other circumstances, since this particular secretion is more immediately under the influence of the passions than any other in the body.

I. OF IMPOTENCE DEPENDING ON THE MIND.

As the parts of generation are not necessary for the existence or support of the individual, as what relates to food and sleep, but have a reference to something else, in which the mind has a principal concern, a complete action in those parts cannot take place without a perfect harmony of body and of mind; that is, there must be both a power of body, and disposition of mind; for the mind is subject to a thousand caprices which affect the actions of these parts.

Copulation is an act of the body, the spring of which is in the mind; but it is not volition; and according to the state of the mind so is the act performed. To perform this act well, the body should be in health, and the mind should be perfectly confident of the powers of the body; the mind should be in a state entirely disengaged from every thing else; it should have no difficulties, no fears, no apprehensions; not even an anxiety to perform the act well; for even this anxiety is a state of mind different from what should prevail; there should not be even a fear that the mind itself may find a difficulty at the time the act should be performed. Perhaps no function of the machine depends so much upon the state of the mind as this.

The will, and reasoning faculty, have nothing to do with this power; they are only employed in the act, so far as voluntary parts are made use of; and if they ever interfere, which they sometimes do, it often produces another state of the mind which destroys that which is proper for the performance of the act; it produces a desire, a wish, a hope, which are all only diffidence and uncertainty, and create in the mind the idea of a possibility of the want of success, which destroys the proper state of mind, or necessary confidence.

The mind has more power over the erection of the penis than over emission of the semen. A man from the state of his mind shall be unable to have an erection, but the slightest degree of friction shall produce an emission.

There is perhaps no act in which a man feels himself more interested, or is more anxious to perform well, his pride being engaged in some degree, which if within certain bounds would produce a degree of perfection in an act depending upon the will, or an act in voluntary parts; but when it produces a state of mind contrary to that state on which the perfection of the act depends, a failure must be the consequence.

The body is not only rendered incapable of performing this act, by the mind being under the above influence, but also by the mind being perfectly confident of its power, but conscious of an impropriety in performing it; this in many cases producing a state of mind which shall take away all power. The state of a man's mind respecting his sister takes away all power. A conscientious man has been known to lose his powers on finding unexpectedly the woman he was going to be connected with a virgin.

Shedding tears arises entirely from the state of the mind, although not so much a compound action as the act in question; for none are so weak in body that they cannot shed tears; it is not so much a compound action of the mind and strength of body, joined, as the other act is; yet if we are afraid of shedding tears, or are desirous of doing it, and that anxiety is kept up through the whole of an affecting scene, we certainly shall not shed tears, or at least not so freely as would have happened from our natural feelings.

From the above account of the necessity of having the mind independent, respecting the act, we must see that it may very often happen that the state of mind will be such as not to allow the animal to exert its natural powers; and every failure increases the evil. We must also see from this state of the case, that this act must be often interrupted; and the true cause of this interruption not being known, it will be laid to the charge of the body, or want of powers. As these cases do notarise from real inability, they are to be carefully distinguished from such as

do; and perhaps the only way to distinguish them is, to examine into the state of mind respecting this act. So trifling often is the circumstance, which shall produce this inability, depending on the mind, that the very desire to please shall have that effect, as in making the woman the sole object to be gratified.

Cases of this kind, we see every day; one of which I shall relate as an illustration of this subject, and also of the method of cure.

A gentleman told me, that he had lost his powers in this way. After above an hour's investigation of the case, I made out the following facts: that he had at unnecessary times strong erections, which showed that he had naturally this power; that the erections were accompanied with desire, which are all the natural powers wanted; but that there was still a defect somewhere, which I supposed to be from the mind. I inquired if all women were alike to him, his answer was no; some women he could have connection with, as well as ever. This brought the defect, whatever it was, into a smaller compass; and it appeared that there was but one woman that produced this inability, and that it arose from a desire to perform the act with this woman well; which desire produced in the mind a doubt, or fear of the want of success, which was the cause of the inability of performing the act. As this arose entirely from the state of the mind, produced by a particular circumstance, the mind was to be applied to for the cure; and I told him that he might be cured, if he could perfectly rely on his own power of self-denial. When I explained what I meant, he told me that he could depend upon every act of his will, or resolution; I then told him, if he had a perfect confidence in himself in that respect, that he was to go to bed to this woman, but first promise to himself, that he would not have any connection with her, for six nights, let his inclinations and powers be what they would; which he engaged to do; and also to let me know the result. About a fortnight after he told me that this resolution had produced such a total alteration in the state of his mind, that the power soon took place, for instead of going to bed with the fear of inability, he went with fears that he should be possessed with too much desire, too much power, so as to become uneasy to him, which really happened;

for he would have been happy to have shortened the time; and when he had once broke the spell, the mind and powers went on together; his mind never returning to its former state. Several similar instances have come under my care, but there is an evident objection to multiplying unnecessarily cases of this kind.

II. OF IMPOTENCE, FROM A WANT OF PROPER CORRESPONDENCE BETWEEN THE ACTIONS OF THE DIFFERENT ORGANS.

I formerly observed, when treating of the diseases of the urethra and bladder, two parts concerned in the actions of each other, that every organ in an animal body was made up of different parts, whose functions, or actions, were totally different from each other, although all tending to produce one ultimate effect. In all such organs, when perfect, there is a succession of motions, one naturally arising out of the other, which in the end produces the ultimate effect; and an irregularity alone in these actions, will constitute disease, at least will produce very disagreeable effects, and often totally frustrate the final intention of the organ. I come now to apply the above principle to the actions of the testicle and penis; for we find that an irregularity in the actions of these parts sometimes happens in men, producing impotence; and something similar, probably, may be one cause of barrenness in women.

In men the parts subservient to generation may be divided into two, the essential, and the accessory. The testicles are the essential; the penis, &c. the accessory. As this division arises from their uses or actions in health, which exactly correspond with one another; a want of exactness in the correspondence, or susceptibility of those actions, may also be divided into two, First; where the actions are reversed, the accessory taking place without the first or essential, as in erections of the penis, where neither the mind, nor the testicles, are stimulated to action; and the second is, where the testicle performs the action of secretion too readily for the penis, which has not a corresponding erection. The first is called priapism; and the second is what ought to be called seminal weakness.

The mind has considerable effect on the correspondence of the actions of these two parts; but it would appear in many instances, that erections of the penis depend more on the state of the mind, than the secretion of the semen does; for many have the secretion, but not the erection; but in such, the want of erection appears to be owing to the mind only.

Priapism often arises spontaneously, and often from visible irritation of the penis, such as the venereal gonorrhœa, especially when violent. The sensation of such erections is rather uneasy than pleasant; nor is the sensation of the glans at the time similar to that arising from the erections of desire, but more like to the sensation of the parts immediately after coition.

Such as arise spontaneously are of more serious consequence than those from inflammation, as they proceed probably from causes not curable in themselves, or by any known methods.

The priapism arising from inflammation of the parts, as in a gonorrhœa, is attended with nearly the same symptoms, but generally the sensation is that of pain, proceeding from the inflammation of the parts. It may be observed, that what is said of priapism, is only applicable to it, when a disease in itself, and not as a symptom of other diseases, which it frequently is.

A gentleman had a priapism for two years; it originated from an irritation in the bladder, which went off at the time the priapism came: it only takes place in the night, and mostly in his sleep, and immediately awakens him; having connection makes it worse.

The common practice in the cure of this complaint, is to order all the nervous and strengthening medicines, such as bark, valerian, musk, camphire, and also the cold bath. I have had experience of the good effects of the cold bath; but sometimes it does not agree with the constitution, in which cases I have found the warm bath of service. Opium appears to be a specific in many cases; from which circumstance I should be apt, upon the whole, to try a soothing plan.

Seminal weakness, or a secretion and emission of the semen without erections, is the reverse of a priapism, and is by much the worst disease of the two. There is great variety in the degrees of this disease, there

being all the gradations, from the exact correspondence of the actions of all the parts, to the testicles acting alone; in every case of the disease there is too quick a secretion and evacuation of the semen. Like to the priapism, it does not arise from desires and abilities, although, when mild, it is attended with both, but not in a due proportion; a very slight desire often producing the full effect. The secretion of the semen shall be so quick that simple thought, or even toying, shall make it flow.

Dreams shall produce this evacuation repeatedly in the same night; and even when the dreams have been so slight, if there have been any, that there has been no consciousness of them when the sleep has been broken by the act of emission. I have known cases where the testicles have been so ready to secrete, that the least friction on the glans has produced an emission: I have known the simple action of walking, or riding, produce this effect, and that repeatedly, in a very short space of time.

A young man, about four or five and twenty years of age, not so much given to venery as most young men, had these last mentioned complaints upon him. Three or four times in the night he would emit; and if he walked fast, or rode on horseback, the same thing would happen. He could scarcely have connection with a woman, before he emitted, and in the emission, there was hardly any spasm. He tried every supposed strengthening medicine, as also the cold bath, and sea-bathing, but with no effect. By taking twenty drops of laudanum, on going to bed, he prevented the night emissions; and by taking the same quantity in the morning, he could walk or ride without the beforementioned inconvenience. I directed this practice to be continued for some time, although the disease did not return, that the parts might be accustomed to this healthy state of action; and I have reason to believe the gentleman is now well. It was found necessary, as the constitution became more habituated to the opiate, to increase the dose of it.

The spasms upon the evacuation of the semen in such cases are extremely slight, and a repetition of them soon takes place; the first emission not preventing a second; the constitution being all the time

but little affected,* When the testicles act alone, without the accessory parts taking up the necessary and natural consequent action, it is still a more melancholy disease; for the secretion arises from no visible, or sensible cause, and does not give any visible or sensible effect, but runs off similar to involuntary stools, or urine. It has been observed, that the semen is more fluid than natural in some of these cases.

There is great variety in the diseased action of these parts, of which the following case may be considered as an example.

A gentleman has had a stricture in the urethra for many years, for which he has frequently used the bougie, but of late has neglected it. He has had no connection with women for a considerable time, being afraid of the consequences. He has often in his sleep involuntary emissions, which generally awake him at the paroxysm; but what surprises him most is, that often he has such, without any semen passing forwards through the penis, which makes him think that at those times it goes backwards into the bladder. This is not always the case, for at other times the semen passes forwards. At the time he has those uncommon paroxysms, he has the erection, the dream, and is awaked with the same mode of action, the same sensation, and the same pleasure, as when the semen passes through the urethra, whether dreaming or waking. My opinion is, that the same irritation takes place in the bulb of the urethra without the semen, that takes place there when the semen enters, in consequence of all the natural preparatory steps, whereby the very same actions are excited as if it came into the passage; from which one would suppose that either semen is not secreted, or if it be, that a retrograde motion takes place in the actions of the acceleratores muscles; but if the first be the case, then we may suppose that in the natural state the actions of those muscles do not arise simply from the stimulus of the semen in the part, but from their action being a termination of a preceding one making part of a series of actions. Thus they may depend

* It is to be considered, that the constitution is commonly affected by the spasms only, and in proportion to their violence, independent of the secretion and evacuation of the semen. In some cases, even the erection going off without the spasms on the emission, shall produce the same debility as if they had taken place.

upon the friction, or the imagination of a friction in the penis, the testicles not doing their part, and the spasm in such cases arising from the friction, and not from the secretion.

In many of those cases of irregularity, when the erection is not strong, it shall go off without the emission; and at other times an emission shall happen almost without an erection; but these arise not from debility, but affections of the mind.

In many of the preceding cases, washing the penis, scrotum, and perinæum with cold water, is often of service; and to render it colder than we find it in some seasons of the year, common salt may be added to it, and the parts washed when the salt is almost dissolved.

CHAPTER XIII.

OF THE DECAY OF THE TESTICLE.

It would appear from some circumstances, that the parts of generation are not to be considered as necessary parts of the animal machine, but only as parts superadded for particular purposes; and therefore only necessary when those particular purposes are to be answered; for we may observe, that they are later of coming to maturity than any other parts, and are more liable to decay. Thus far in their natural properties they are different from most other parts of our body, the teeth only excepted, which are similar in some of those circumstances.

The testicles appear to be more subject to spontaneous disease than any other part of the body; but what is the most singular thing of all, is the wasting of those bodies. One or both testicles shall wholly disappear, like to the thymus gland, or membrana pupillaris, &c. in the infant. This we do not find in any parts of the body which are essential to its economy; excepting the parts are of no further use, and might become hurtful in the body, as the membrana pupillaris; but the testicles do not undergo this change as if in consequence of an original property stamped upon them, as is the case of the thymus gland, whenever the age of the person is such as to render them useless; but are liable to it at any age, and therefore the disposition is in the testicles themselves, independent of any connection with the animal economy. An arm, or leg, may lose its action, and may waste in part, but never wholly.

Testicles have been known to waste in cases of rupture, probably from the constant pressure of the intestine. Mr. Pott has given us cases of this kind. I have seen in hydrocele the testicle almost wasted to nothing, probably from the compression of the water; but in all these the causes

of wasting are obvious, and would probably produce similar effects in other parts of the body under the same circumstances; but a testicle, without any previous disease, wastes wholly; or at other times it inflames, either spontaneously, or from sympathy with the urethra, becomes large, and then begins to subside, as in the resolution of common inflammation of the body, but does not stop at the former size, but continues to decay till it wholly disappears. The following cases are instances of this:

Case I. A gentleman about nine years ago had a gonorrhœa, with a buboe, which suppurated. A swelling of one of the testicles came on, for which he used the common methods of producing resolution, and seemingly with success. All the other symptoms being removed, he thought himself quite well; but some time after, he found that the testicle which had been swelled was become rather smaller than the other, which made him now pay attention to it. This decrease continued till it wasted entirely. For some years past there has been no appearance of a testicle. He is not in the least different in inclination, or powers, from what he was before.

Case II. communicated to me by Mr. Nanfan. "A gentleman, aged about 18, who never had any venereal complaint, has had two different attacks of the same nature, one in each testicle. February 3, 1776, after skating a few hours, without having to his knowledge received any injury from it, he was seized with a violent pain and inflammation of the left testicle, which in a few days increased much in size. A surgeon being sent for, followed the usual treatment in such cases of inflammation. In about six weeks the inflammation and swelling gradually subsided, some hardness only remaining. A mercurial plaister was now applied, which after being worn for some time was left off. The testicle ever since has continued gradually to decrease, and is no larger than a horse bean; indeed the body of the testicle is quite decayed, nothing remaining but what seems part of the epididymis. It appears to have no sense of pain, except when pressed, and is very hard and uneven on its surface. The spermatic chord is not in the least affected."

October 20, 1777, he was seized in the same manner in the right

testicle, without any apparent cause, whereupon I was applied to. He was immediately bled, took an opening mixture, after that a saline mixture with tartar emetic; and a fomentation and embrocation of spiritus mindereri, and spiritus vini, was used. On the 27th a cataplasm was applied of linseed meal and aqua vegeto-mineralis. This treatment was persisted in till about the middle of November. The inflammation went off, and the testicle seemed much in the natural state. On December 19, I was applied to again; it seemed to be growing hard, and decreasing in size, much in the same manner as the other had done, which made him very unhappy. I ordered him some pills with calomel and tartar emetic, in hopes of increasing the secretion of the glands in general, and making some change in the testicle. At first this method seemed to be of service, but soon lost its effects, and the testicle began to decrease just as the other did. Mr. Adair and Mr. Pott were consulted with me, but nothing could be thought of that could give any hopes of success. I advised him to try electricity, and to employ the parts in their natural uses, as much as inclination led him, with a view of putting a stop to the unnatural actions; but all was to no purpose, the testicle continued to decrease till not a vestige was left.

Case III. communicated by Dr. Cothom of Worcester.

"A young man, aged sixteen, was suddenly seized with great coldness and shivering, attended with frequent rigors. During this paroxysm, which continued three hours, his pulse was small and contracted, and so exceedingly quick that the strokes of the artery were with difficulty counted. This period was succeeded by an intense heat, and a strong, hard, full pulse, on which account he was copiously bled; a dose of cooling physic was immediately administered, and a clyster thrown up to promote its more speedy effects. In the evening the bleeding was repeated. All this day he complained of excruciating pain in his loins, and the side of his belly, descending down into the scrotum. On examining the part affected, I saw an appearance of inflammation in the groin of the left side, and a great tension about the ring of the abdominal muscles, with an enlargement of the testicles. These parts were now ordered to be fomented with a discutient fotus strongly impregnated

with crude sal ammoniac, and to be bathed with spiritus mindereri, and spiritus volatilis aromat. before the application of each stupe; and he was directed take six grains of the pulv. antimonialis, with fifteen grains of nitre every three hours; his food to be thin gruel, with fruit and lemon juice, and his drink barley-water with sugar and nitre. Notwithstanding this antiphlogistic plan of frequent cooling physic, anodynes, three emetics, and thirteen blood lettings, the fever continued, and the pain, inflammation and tumour increased till the eighth day, including the first day of seizure; when seeing no hope of discussing the tumour, the testicle being nearly as large as a child's head, I attempted by emollient fotuses, and maturating cataplasms, to bring it to suppuration. On the 10th, a fluctuation was perceptible; and on the 12th, much more so, the scrotum having then put on a livid appearance. I used every possible argument for permission to open it, but he being now quite easy would not admit it. On the 15th, the patient was again attacked with rigors, coldness and shivering, succeeded by a great feverish heat, which soon terminated in a profuse sweat, yet no pain attended this paroxysm. In the evening however the tumour was so prominent that I was of opinion it would open spontaneously before morning, when I hoped to obtain his consent to enlarge the aperture; but this not happening, and all remonstrance and entreaties relating to the necessity of an incision proving ineffectual, I contented myself with giving the bark with elixir of vitriol. From this time, after every fever paroxysm, the testicle was observed to decrease; not being permitted to make an incision, and his strength and appetite continuing good, I began to entertain hopes of success without it, and advised him to persist in the use of the tonic and antiseptic plan, with the addition of stupes wet with the decoction of bark, to be constantly applied; by which means at the end of thirty days from the first seizure the pus was totally absorbed. The testicle then appeared to be of the size of a hen's egg, and was as hard as a schirrus. I directed it to be rubbed night and morning, with equal parts of the unguent. mercur. fort. and liniment. volat. camphorat. and ordered internally some mercurial alteratives, with a decoction of bark. By these aids his night sweats, and every other disagreeable

symptom, gradually abated; he gathered strength, flesh and spirits, very fast, and the diseased testicle went on constantly decreasing, though very slowly, for near twelve months; at the expiration of which time there was no other appearance of it than a confusion of loose fibres, obvious to the feeling, in the upper part of the scrotum. About a month ago the patient consented to my examining it. Of the testicle there was not the least vestige, neither could I perceive the tunica vaginalis on that side of the groin; but upon the os pubis, and a little under it, I could embrace with my fingers and thumb the chord, and distinguish the vessels, which were without the least degree of hardness or schirrosity; and if I pressed one in particular, I gave him exquisite pain for a moment. He is in perfect health, a strong, robust constitution, and has fine healthy children; the only change he perceived in the constitution was a propensity to grow fat, which neither temperance, nor violent exercise on horseback, daily, with little rest, will prevent."

Case IV. a gentleman had a stricture for which he passed a bougie; inflammation and swelling came upon one of the testicles, the inflammation was removed and the swelling subsided, the testicle continued to diminish till it was extremely small.

Case V. a gentleman had received a hurt upon one of his testicles in riding, it inflamed and swelled to a very great degree; the symptoms went off, and he considered himself well; it did not however remain of the natural size, but gradually diminished till it entirely disappeared.

Case VI. a gentleman was lifted from the ground by the hands with a considerable jerk: he felt immediately a violent pain in the groin of the right side, and an inflammation and swelling came upon the right testicle, when this subsided, the testicle diminished to the size of a pea, and was very hard in its substance.

Case VII. a gentleman eighteen years of age, had a swelling brought upon one of his testicles, by lying upon wet grass, it afterwards continued to diminish, till it was only one fourth of the natural size.

Case VIII. a gentleman twenty years of age had been attacked at various times in the preceding eight years, with violent pain and swelling in the right testicle and spermatic chord, which went entirely off, till

two years ago, there was a more violent seizure: for eight hours the pain was intolerable; and the swelling very great; it confined him six weeks: since that time, it has been diminishing in size, and increasing in hardness: at present it is as small as a horse-bean, and the spermatic chord is contracted. The left testicle has occasionally swelled, but always recovered its natural size. During the time he was affected with this pain, he has felt at intervals a pain about the neck of the bladder, especially when he made water, but not in any violent degree, he likewise frequently feels during these attacks, a sensation like the circulation of some fluid within the testicles.

PART IV.

CHAPTER I.

OF CHANCRE.

I HAVE been hitherto speaking of the effects of this poison, when applied to a secreting surface and without a cuticle, of the intention of nature in producing these effects, and of all the consequences, both real and supposed: I now mean to explain its effects when applied to a surface that is covered with a common cuticle, as the common skin of the body, which on such a surface will be found to be very different from those I have been describing. But I may be allowed here to remark, that the penis, the common seat of a chancre, is, like every part of the body, liable to diseases of the ulcerative kind; and from some circumstances, rather more so than other parts; for if attention is not paid to cleanliness, we have often excoriations, or superficial ulcers, from that cause; also, like almost every other part that has been injured; these parts when once they have suffered from the venereal disease are very liable to ulcerate anew. Since then this part is not exempted from the common diseases of the body, and as every disease in this part is suspected to be venereal, great attention is to be paid in forming our judgment of ulcers there.

Venereal ulcers commonly have one character, which however is not entirely peculiar to them, for many sores that have no disposition to heal, which is the case with a chancre, have so far the same character. A chancre has commonly a thickened base, and although in some the common inflammation spreads much further, yet the specific is confined to this base. The future, or consequent ulcers, are commonly easily

distinguished from the original, or venereal, which will be described hereafter.

It is an invariable effect, that, when any part of an animal is irritated to a certain degree, it inflames and forms matter; the intention of which is to remove the irritating cause. This process is easily effected when it is on a surface whose nature is to secrete; but when on a surface whose nature is not to secrete, it then becomes more difficult, for another process must be set up, which is ulceration. This is not only the case in common irritations, but also in specific irritations from morbid poisons, as the venereal disease and small-pox. The variolous matter, as well as the venereal, produces ulcers on the skin; but when it affects secreting surfaces a diseased secretion is the consequence; and this is different in different parts; on the tongue, inside of the mouth, uvula and tonsils, the coagulable lymph is thrown out in form of sloughs, somewhat similar to the putrid sore throat; but in the fauces and all down the œsophagus, a thickish fluid in appearance like matter is secreted. When the irritation is applied to a surface whose cuticle is thin, and where there is a secretion naturally, as the glans penis, or inside of the prepuce, there it sometimes only irritates, so as to produce a diseased secretion, as was described; but this is not always the effect of such irritation on such surfaces, they are often irritated to ulceration, producing a chancre.

The poison has in general either no disposition or not sufficient powers to blister or excoriate the common skin, for if it did, the symptoms most probably would be at first nearly the same if not exactly so with a gonorrhœa; that is a discharge of matter from a surface without a cuticle newly inflamed; for it is reasonable to suppose, that the poison would produce on that excoriated surface a secretion of matter which would be at first a gonorrhœa, and which very probably would afterwards fall into the second mode of action, or ulceration, and then become a chancre.

There are three ways in which chancres are produced. First, by the poison being inserted into a wound; secondly, by being applied to a non-secreting surface; and thirdly, by being applied to a common sore. To which ever of these three different surfaces it is applied, the pus pro-

duces its specific inflammation and ulceration, attended with a secretion of pus. The matter produced in consequence of those different modes of application is of the same nature with the matter applied, because the irritations are the same in both.

The poison much more readily contaminates if it is applied to a fresh wound, than to an ulcer, in this resembling the inoculation of the small-pox. Whether there are any parts of the skin, or any other part of the body, more susceptible of this irritation than others in consequence of local application, is not yet ascertained.

This form of the disease, like the first, or gonorrhœa, is generally caught on the parts of generation, in consequence of a connection between the sexes; but any part of the body may be affected by the application of venereal matter, especially if the cuticle is thin.

I have seen a chancre on the prolabium, as broad as a sixpence, caught the person did not know how.* The penis, and particularly the prepuce, being the parts most commonly affected by this form of the disease, are so constructed as to suffer much from it, especially when they are very susceptible of such irritation; for the construction alone produces many inconveniences, besides considerable pain, while under the disease, and in general retards the cure.

The chancre is not so frequent an effect of the poison as the gonorrhœa; and I think very good reasons may be assigned for it, although there are more modes than one of catching it, as I just now mentioned; but the parts in two of them, to wit, the wound, and the sore, are seldom in the way of being infected; therefore when it is caught it is commonly by the same mode of application with that of the gonorrhœa; but as the cuticle cannot be affected by this poison, this covering acting as a guard to the cutis, it is often prevented from coming in contact with it; and indeed it is almost surprising that the cutis should ever be affected by it, where it has such a covering, excepting about the glans, the inside of the prepuce, or other parts of the body, where this

* That this sore was a chancre I made no doubt, for besides its diseased appearance, he had a buboe forming in one of the glands under the lower jaw, on the same side.

It is most probable that he caught it by his own fingers being the conveyers.

covering is thin. The proportion which the cases of gonorrhœa bear to those of chancre is as four or five to one.

When it is caught in men, it is generally upon the frænum, glans penis, prepuce, or upon the common skin of the body of the penis; and sometimes on the fore part of the scrotum; but I think most frequently on the frænum, and in the angle between the penis, and glans. Its affecting these parts arises from the manner in which it is caught, and not from any specific tendency these parts have to catch it more than others; and its affecting the frænum, &c. more frequently than the other parts of the penis arises from the external form of this part, which is irregular, and allows the venereal matter to lie undisturbed in the chinks; by which means it has time to irritate, and inflame the parts, and to produce the suppurative, and ulcerative inflammation in them. But as this matter is easily rubbed off from prominent parts, by every thing that touches them, it is a reason why such parts in general so often escape this disease.

The distance of time between its application, and its effects, upon the part is uncertain; but upon the whole it is rather longer of appearing than the gonorrhœa; however this depends in some measure on the nature of the parts affected. If it be the frænum, or the termination of the prepuce into the glans that is affected, the disease will in general appear earlier; these parts being more easily affected than either the glans, common skin of the penis, or scrotum; for in some cases where both the glans and prepuce were contaminated from the same contamination, it has appeared earlier on the prepuce.

I have known cases where the chancres have appeared twenty-four hours after the application of the matter, and I have known them seven weeks. A remarkable case of this kind was in a gentleman who had not touched a woman for seven weeks, when a chancre appeared, which was very probably the reason of the poison contaminating at all, for it is probable, the having connection with another woman might have proved a prevention, by freeing the parts from the venereal matter. That this was a venereal chancre was proved, by his having had the lues venerea from it, and being under a necessity of taking mercury. An

officer in the army had a chancre break out upon him two months after he had had any connection with a woman. After the last connection he marched above an hundred miles, the chancre broke out, and only gave way to mercury.

This, like most other inflammations, which terminate in ulcers, begins first with an itching in the part; if it is the glans that is inflamed, generally a small pimple appears full of matter, without much hardness, or seeming inflammation, and with very little tumefaction, the glans not being so readily tumefied from inflammation as many parts are, especially the prepuce; nor are the chancres attended with so much pain or inconvenience, as those on the prepuce; but if upon the frænum, and more especially the prepuce, an inflammation more considerable than the former soon follows, or at least the effects of the inflammation are more extensive and visible. Those parts being composed of very loose cellular membrane, afford a ready passage for the extravasated juices; continued sympathy also more readily takes place in them. The itching is gradually changed to pain; the surface of the prepuce is in some cases excoriated, and afterwards ulcerates: in others a small pimple, or abscess appears, as on the glans, which forms an ulcer. A thickening of the part comes on, which at first, and while of the true venereal kind, is very circumscribed, not diffusing itself gradually and imperceptibly into the surrounding parts, but terminating rather abruptly. Its base is hard, and the edges a little prominent. When it begins on the frænum, or near it, that part is very commonly wholly destroyed, or a hole is often ulcerated through it, which proves rather inconvenient in the cure, and in general it had better in such cases, be divided at first. The original excoriation or wound may heal although contaminated, and afterwards become a chancre. A gentleman in the act of copulation tore the root of his prepuce all round, but in two days the whole healed, but one part broke out afterwards into a chancre, with a hard base, which readily yielded to mercury. This is similar to what takes place in inoculation for the small-pox.

If the venereal poison should be applied to the skin, where the cuticle is more dense than that of the glans penis, or frænum, such as that upon

the body of the penis, or forepart of the scrotum; parts which are very much exposed to the application of this matter, then it generally appears first in a pimple, which is commonly allowed to scab, owing to its being exposed to evaporation. This scab is generally rubbed off, or pushed off, and one larger than the first forms. I think there is less inflammation attending these last than those on the frænum and prepuce, but more than those upon the glans.

When the disease is allowed to go on, so as to partake of the inflammation peculiar to the habit, it becomes in many instances more diffused, and is often carried so far, as to produce disagreeable symptoms, as phymosis, and sometimes paraphymosis; greatly retarding the cure; but still there is a hardness peculiar to this poison, surrounding the sores, especially those upon the prepuce.

When these ulcers are forming, and after they are formed, or in the state of inflammation, it is no uncommon thing for the urethra to sympathise with them, and give a tickling pain, especially in making water; but whether there is ever a discharge in the urethra from such a cause I will not determine; but if a discharge never takes place but when the disease really attacks the urethra, it would make us suppose that this sympathy is not really inflammatory; or if it is carried so far as to produce inflammation, yet that it is not of the specific kind. However it is possible in those cases where there is a gonorrhœa preceded by a chancre, that this gonorrhœa may arise from sympathy, and is not a disease proceeding from the original contamination, nor from the matter of the chancre. That the sensation in the urethra, in those instances where there is no discharge, is from sympathy, and not from the urethra being attacked with the disease at the time that the matter laid the ground-work for the chancre, is evident from the following observation. I have seen it happen more than once, when the seat of the chancre had broke out a second time, and where no new or fresh infection had been caught, that the patient complained of the same tickling and slight pain in the urethra before any discharge had taken place in the beginning ulcerations. From the same connection of parts I have seen a chancre coming upon the glans absolutely cure both a gleet and an irritation all

along the passage of the urethra. So great was the previous irritation in this case, that I suspected a stricture; but on passing a bougie found none.

In consequence of the urethra sympathising with the chancre, the testicles and scrotum will further sympathise with the urethra, and become affected. I have seen this sympathy extend over the whole pubes, and so strong that touching the hairs gently on the pubes has given disagreeable sensations, and even pain.

In speaking of the local, or immediate effects of the venereal disease, I mentioned that they were seldom wholly specific, and that they partook both of the specific and the constitutional inflammation; and therefore it is always very necessary to pay some attention to the manner in which chancres first appear, and also to their progress; for they often explain the nature of the constitution at the time. If the inflammation spreads fast, and considerably, it shows a constitution more disposed to inflammation than natural. If the pain is great it shows a strong disposition for irritation. It also sometimes happens that they begin very early to form sloughs; when this is the case they have a strong tendency to mortification.

These additional symptoms mark the constitution and direct the future mode of treatment.

Where there is a considerable loss of substance, either from sloughing or ulceration, a profuse bleeding is no uncommon circumstance, more especially if the ulcer is on the glans; for it would appear that the adhesive inflammation does not sufficiently take place there to unite the veins of the glans so as to prevent their cavity from being exposed, and the blood is allowed to escape from what is called the corpus spongiosum urethræ. The ulcers, or sloughs, often got as deep as the corpus cavernosum penis, where the same thing happens.

The Editor begs to remark that excoriations sometimes take place which continue for ten days, with little or no increase, and afterwards spread very slowly, not in any part of their progress resembling chancres, though they in general, prove in the end to be

so, not healing without the use of escarotics, or mercury, and affecting the constitution, producing secondary symptoms. These cases are more common than is generally believed, which makes it necessary to point them out.

I. OF THE PHYMOSIS AND PARAPHYMOSIS.

These diseases arise from a thickening of the cellular membrane of the prepuce, in consequence of an irritation capable of producing considerable and diffused inflammation, which when it does happen is generally in consequence of a chancre in this part. This irritation however, and inflammation sometimes attacks the prepuce, even when the disease is in the form of what I suspect to be a gonorrhœa of the glans and prepuce,* sometimes even in the common gonorrhœa, but most frequently of all from a chancre in the prepuce. When this disease or tumefaction takes place in consequence of a chancre, I suspect that there is an irritable disposition in the habit; for it is plain there is more than the specific action, the inflammation extending beyond the specific distance.

It may be observed here, that the prepuce is no more than a doubling of the skin of the penis when not erected, for then it becomes too large for the penis, by which provision the glans is covered and preserved when not necessary to be used, whereby its feelings are probably more acute. When the penis becomes erect it in general fills the whole skin, by which the doubling forming the prepuce in the non-erect state is unfolded, and is employed in covering the body of the penis.

The diseases called phymosis and paraphymosis, being a thickening of the cellular membrane of this part, they will commonly be in proportion to the inflammation and distensibility of the cellular membrane of the part. The inflammation often runs high, and is frequently of the erisypelatous kind; besides, in such parts where the cellular membrane is so very loose, the tumefaction is considerable, the end of the prepuce being a depending part the serum is accumulated in it, which

* See pages 43, 44 where this gonorrhœa is mentioned.

in many inflammations is allowed to pass from the inflamed to some more depending part, as in an inflammation of the leg or thigh where the foot commonly swells or becomes œdematous, in consequence of the descent of the serum extravasated above.

A natural contraction of the aperture of the prepuce is very common, and so strong in some, that those under such construction of parts have a natural and constant phymosis. Such a state of parts is often attended with chancres, producing very great inconveniences in the time of the cure, and in those cases of considerable diffused inflammation, a diseased phymosis, similar to the other, is unavoidably the case; and whether diseased or natural, it may produce the paraphymosis, simply by the prepuce being brought back upon the penis; for this tight part acting as a ligature round the body of the penis, behind the glans, retards the circulation beyond the ligature, producing an œdematous inflammation on the inverted part of the prepuce. When the paraphymosis takes place in consequence of a natural tightness only, although attended with chancres, yet it has nothing to do with the constitution, this being only accidental; however, in either case, a paraphymosis is to be considered as in some degree a local violence.

This natural phymosis is so considerable in some children as not to allow the urine to pass with ease, but in general the orifice becomes larger and larger, as boys grow up, by frequently endeavouring to bring it over the glans, which effect often prevents the bad consequences that would otherwise ensue in it when effected with disease.

This part of the prepuce, although in most men it is loose enough to produce no inconvenience in a natural state, yet it sometimes contracts without any visible cause whatever, and becomes so narrow as to hinder the water from getting out, even after it has got free of the urethra, so that the whole cavity of the prepuce shall be filled with urine, giving great pain. The cases that I have seen of this kind have been principally in old men.

When the prepuce is in its natural position it then covers entirely the glans, and is commonly a little loose before it; but when it begins to swell and thicken, more and more of the skin of the penis is drawn

forwards over the glans, and the glans at the same time is pushed backwards by the swelling against its end. I have seen the prepuce projecting from such a cause more than three inches beyond the glans, and its aperture much diminished.

It often becomes in some degree inverted by the inner skin yielding more than the outer, having a kind of neck where the outer skin naturally terminates. From the tightness and distension of the parts in a state of tumefaction, it becomes impossible to bring it back over the penis, so as to invert it, and expose the sores on the inside.

Such a state of the prepuce is very often productive of bad consequences, especially when the chancres are behind the glans, for the glans being between the orifice of the prepuce and the sores, it there fills up the whole cavity of the prepuce, between the chancres and opening, and often so tightly, that the matter from the sores behind cannot get a passage forwards between the glans and prepuce, by which means there is an accumulation of matter behind the corona glandis, forming an abscess, which produces ulceration upon the inside of the prepuce. This abscess opens externally; and the glans, often protruding through the opening, throws the whole prepuce to the opposite side, the penis appearing to have two terminations.

On the other hand, if the prepuce is loose, wide, and is either accustomed to be kept back in its sound state, or is pulled back to dress the chancres, and is allowed to remain in this situation till the above tumefaction takes place, then it is called a paraphymosis; or if the prepuce is pulled forcibly back after it is swelled, it is then brought from the state of a phymosis, as before described, to that of a paraphymosis.

This last described situation of the prepuce is often much more troublesome, and often attended with worse symptoms than the former, especially if it should have been changed from a phymosis to a paraphymosis. The reason of which is, that the aperture of the prepuce is naturally less elastic than either the internal inverted part, or the external skin; therefore, when the prepuce is pulled back upon the body of the penis, that part grasps it tighter than any other part of the skin of the penis, and more, in proportion to the inflammation; the consequence

of which is, the swelling of the prepuce is divided into two, one swelling close to the glans, the other behind the stricture, or neck. This stricture is often so great as to interrupt the free circulation of the blood beyond it, which also assists in increasing the swelling, adds to the stricture, and often produces a mortification of the prepuce itself, by which means the whole diseased part, together with the stricture, is sometimes removed, forming what may be called a natural cure.*

In many cases, the inflammation not only affects the skin of the penis, in which is included the prepuce, but it attacks the body of the penis itself, often producing adhesions, and even mortification in the cells of the corpus cavernosum, either of which will destroy the distensibility of that part ever after, giving the penis a curve to that side in its erections. This sometimes takes place through the whole cellular substance of the penis, producing a short and almost inflexible stump.

The adhesions of those cells are not confined to the venereal inflammation as a cause; we sometimes see them taking place without any visible cause whatever, and often in consequence of other diseases.

A gentleman, sixty years of age, who has been lame with the gout these twenty years past, but has for these eighteen months had the penis contracted on the left and upper side, so as to bend that way, very considerably in erections, which erections are more frequent than common.

Quere: Is the gout the cause of this, by producing adhesions of the cells of one corpus cavernosum, so as not to yield to, or allow of the influx of blood on that side? And is the irritation of the gout the cause, of the frequency of the erections?

The Editor, in this place, wishes to correct a mistake, with respect to the circulation of the penis, which anatomists have fallen into, believing that the blood, in the state of erection, is contained in the cellular

* A young man came into St. George's Hospital, with a paraphymosis in consequence of chancres on the inside of the prepuce. All the parts before the stricture formed by the prepuce mortified and dropped off. I ordered nothing to be done but to dress it with common dressings, and it healed very readily; and he left the Hospital cured of the local complaint. Whether or not absorption had taken place, previous to the mortification, I do not know, as I never heard more of him.

structure of the corpora cavernosa. His friend Mr. Cuvier discovered that, in the elephant, arteries are found enclosed in these cells; and therefore very justly concluded that these arteries were filled with blood, and that no extravasation into the cells took place: Mr. Cuvier ascertained the same fact in other animals, so as to establish the general principle. In making experiments upon the spleen, and investigating the circulation in that viscus, the Editor was much struck with the similarity between the structure of the network in the spleen and corpora cavernosa penis;* and found, by injecting the arteries of the penis of the ass, and then distending the network with spirit of wine, so as to fix it in the distended state, and afterwards cutting it in thin slices, and then drying them, the preparations confirmed, in the most satisfactory manner, the observations of Mr. Cuvier.

This network, then, answers the same purpose in the penis as in the spleen; it adapts the corpora cavernosa to the two states in which they are met with when relaxed and erected; and all that is required for the erection is the smaller arteries being filled with blood, which readily takes place from an increased action in the neighbouring trunks, as is found to be the case in the spleen, when influenced by the state of the stomach; in the cheeks, when influenced by the state of mind; in the clitoris and plexus retiformes, when influenced by the passions.

* Vide Phil. Trans. for 1808.

CHAPTER II.

OF CHANCRE IN WOMEN.

WOMEN are subject to chancres, but from the simplicity of the parts the complaint is often less complicated than in men; for in this sex we have only the disease and constitutional affection, no inconvenience arising from the formation of the parts.

When the matter is introduced into the vagina or urethra, it there irritates a secreting surface, as has been described when treating of the disease in general, and of women in particular; but when it is lodged in the inside of the skin of the labia, nymphæ, &c. similar to the glans penis, they are often only affected with gonorrhœa; but, like the parts in men, they are also capable of ulceration; these ulcerations are generally more numerous in women, because the surface, upon which they can form, is much larger. We find them on the edge of the labia, sometimes on the outside, and even on the perinæum.

These ulcers that are formed on the inside of the labia, nymphæ, &c. are never allowed to dry or scab; but those on the outside of the labia, &c. are subject to have the matter dry upon them, which forms a scab, similar to those on the body of the penis or scrotum.

The venereal matter from such sores is very apt to run down the perinæum to the anus, as in a gonorrhœa, and excoriate the parts, especially about the anus, where the skin is thin, often producing chancres in those parts.

Chancres have been observed in the vagina, which I suspect not to have been original ones, but to have arisen from the spreading of the ulcers on the inside of the labia.

This form of the disease like the gonorrhœa, both in women and in men is entirely local, the constitution having no connection with it but sympathetically, and I believe much more seldom in this than in the former.

CHAPTER III.

GENERAL OBSERVATIONS ON THE TREATMENT OF CHANCRES.

The inflammation from the venereal poison, when it produces ulceration, generally, if not always, continues till cured by art, which I observed was not the case with the gonorrhœa. It will perhaps not be an easy task to account for this material difference in the two kinds of disease; but I am inclined to think that, as the inflammation in the chancre spreads, it is always attacking new ground, which is a succession of irritations, and is the cause that it does not cure itself.

Chancres, as well as the gonorrhœa, are perhaps seldom or never wholly venereal, but are varied by certain peculiarities of the constitution at the time. The treatment, therefore, of them, both local and constitutional, will admit of great variety; and it is upon the knowledge of this variety, that the skill of the surgeon principally depends. On this account the concomitant symptoms are what require particular attention. Mercury is the cure of the venereal symptoms, abstractedly considered; but there is no one specific for the others, the treatment of which must vary according to the constitution. From hence we must see that no one kind of medicine, joined with mercury, will be likely to succeed in all cases, although the different pretended secrets are of this kind. Some cases not requiring any thing except mercury, others requiring a something besides, according to their nature, which in many cases it will not be an easy matter to find out, from the appearances of the chancre itself, but which must be discovered by repeated trials.

Probably from the beforementioned circumstance it is, that a chancre is in common longer in healing than most of the local effects from the constitutional disease, or lues venerea; at least, longer than those in the

first order of parts; and this is found to be the case, notwithstanding that the cure of a chancre may be attempted both constitutionally, and locally, while the lues venerea can in common only be cured constitutionally. It is commonly some time before a chancre appears to be affected by the medicine. The circulation shall be loaded with mercury for three, four, or more weeks, before a chancre shall begin to separate its discharge from its surface, so as to look red, and show the living surface: but when once it does change, its progress towards healing is more rapid. A lues venerea shall in many cases be perfectly cured before chancres have made the least change.

Upon the same principle some attention should be paid to internal medicines; and it should be considered, whether weakening, strengthening, or quieting medicines should be given; for sometimes one kind, sometimes another, will be proper.

Chancres admit of two modes of treatment; the object of one, is to destroy, or remove them by means of escharotics, or by extirpation; that of the other, is to overcome the venereal irritation by means of the specific remedy for that poison.

I have endeavoured to shew that chancres are local complaints; this opinion is further confirmed by their being destroyed or cured by merely a local treatment. But in chancres, as well as in a gonorrhœa, it has been disputed whether mercury should ever be applied locally to them or not; some having objected to it, while others have practised it, and probably the dispute is not yet generally settled.

Upon the general idea I have endeavoured to give of the venereal disease, it can be no difficult task to determine this question.

It is to be observed that in the cure of chancres we have two points in view, the cure of the chancre itself, and the prevention of a contamination of the constitution.

The first, or the cure of the chancre, is to beeffected by mercury applied either in external dressings, or internally through the circulation, or in both ways. The second object, or preservation of the constitution from contamination, is to be obtained, first by shortening the duration of the chancre, which shortens the time of absorption, and also by internal

medicine, which must be in proportion to the time, that the absorption may have been going on.

If the power of a chancre to contaminate the constitution, or which is the same thing, if the quantity absorbed is as the size of the chancre, and the time of absorption, which most probably it is, then whatever shortens the time must diminish that power, or quantity absorbed; and if the quantity of mercury necessary to preserve the constitution is as the quantity of poison absorbed, then whatever lessens the quantity absorbed must proportionally preserve the constitution. For instance, if the power of a chancre to contaminate the constitution in four weeks is equal to four, and the quantity of mercury necessary to be given internally, both for the cure of the chancre and the preservation of the constitution, is also equal to four, then whatever shortens the duration of the chancre must lessen in the same proportion the quantity of the mercury; therefore if local applications along with the internal use of mercury will cure the chancre in three weeks, then only three-fourths of the mercury is necessarily wanted internally. Local applications therefore, so far as they tend to shorten the duration of a chancre, shorten the duration of absorption, which also shortens the necessity of the continuance of an internal course of mercury, all in the same proportion. For example, if four ounces of mercurial ointment will cure a chancre and preserve the constitution in four weeks, three ounces will be sufficient to preserve the constitution if the cure of the chancre can be by any other means forwarded so as to be effected in three weeks. This is not speculation, but the result of experience, and the destruction of chancres confirms it.

I. OF THE DESTRUCTION OF A CHANCRE.

The simplest method of treating a chancre is by destroying or extirpating it, whereby it is reduced to the state of a common sore or wound, and heals up as such. This only can be done on the first appearance of the chancre, when the surrounding parts are not as yet contammated; because it is absolutely necessary that the whole diseased part should be removed, which is done with difficulty when it has spread considerably.

It may be done either by incision or by caustic. If the chancre appears upon the glans, touching it with the lunar caustic is preferable to incision, because the hœmorrhage by such a mode would be considerable, from the cells of the glans.

The common sensation of the glans is not very acute, therefore the caustic will give but little pain. The caustic to be used should be pointed at the end like a pencil, that it may only touch those parts that are really diseased; this treatment should be continued till the surface of the sore looks red and healthy after having thrown off the last sloughs; after it has arrived at this state it will be found to heal like any other sore produced from a caustic.

If the sore is upon the prepuce, or upon the common skin of the penis, and in its incipient state, the same practice may be followed with success; but if it has spread considerably it is then out of the power of the caustic when only applied in this slow manner, to go so deep as to keep pace with the increasing sore; but it is very probable that the lapis septicus may answer very well in such cases. When this cannot be conveniently used, incision will answer the purpose effectually.

I have dissected a chancre out, and the sore has healed up without any other treatment but common dressings.

However, as our knowledge of the extent of the disease is not always certain; and as this uncertainty increases as the size of the chancre, it becomes necessary in some degree to assist the cure by proper dressings, and therefore it may be prudent to dress the sore with mercurial ointment.

From such treatment there is but little danger of the constitution being infected, especially if the chancre has been destroyed almost immediately upon its appearance, as we may then reasonably suppose there has not been time for absorption.

But as it must be in most cases uncertain whether there has been absorption or not, this practice is not always to be trusted to; and from that circumstance perhaps never should; and therefore even in those cases where the chancre has been removed almost immediately, it would be prudent to give some mercury internally; the quantity should be

proportioned to the time and progress of the sore; but if it has spread to a considerable size before extirpation, then mercury is absolutely necessary, and perhaps not a great deal is gained by the extirpation.

The Editor has found that when an attempt has been made to destroy a chancre, without complete success by the first application, that the irritation produced encreases the disposition to absorption, and he has met with more cases of chancre so treated followed by secondary symptoms, than when the chancre was cured through the medium of the constitution. There is another advantage attending this last mode, which is, that the chancre serves as an index to direct the constitutional treatment.

II. OF THE CURE OF CHANCRES—LOCAL APPLICATIONS.

The cure of a chancre is a different thing from its destruction, and consists in destroying its venereal disposition and action, and then the parts heal of course as far as they are venereal.

Chancres may be cured in two different ways, either by external applications or internal applications through the circulation. The same medicine is necessary for both these purposes, that is mercury.

I have shown that a gonorrhœa and a chancre have so far the same disposition as to form the same kind of matter; yet I have also observed that mercury has no more power in curing the gonorrhœa than any other medicine; and therefore it might be supposed that mercury would have no effect in the present complaint; but we find that in a chancre it is a specific, and will cure every one that is truly venereal; but as other dispositions take place so other assistance is often necessary, as will be taken notice of in the history of the cure.

The action of this medicine must be the same in whatever way it is given, for its action must be upon the vessels of the part, in one way acting only externally, in the other internally.*

* This is well illustrated by the applications of some medicines locally to parts whose actions are immediate and visible; and by throwing the same medicine into the constitution

For external local applications, mercurial ointments are the common dressings; but if the mercury were joined with watery substances instead of oily, by mixing with the matter, the application would be continued longer to the sore, and would prove more effectual. This is an advantage that poultices have over common dressings. I have often used mercury rubbed down with some conserve in the room of an ointment, and it has answered extremely well. Calomel used in the same way, and also the other preparations of mercury mixed with mucilage or with honey, answers the same purpose. Such dressings will effect a cure in cases that are truly venereal; but perhaps we seldom have a constitution so free from any tendency to some disease as to be capable of taking on the venereal action simply by itself.

Some will take on an indolent disposition, to counteract which the actions should be increased by joining with the mercury some warm balsam in a small proportion, or as much red precipitate as will only stimulate without acting as an escharotic; and sometimes both may be necessary.

Calomel mixed with some salve, or any other substance which will suspend it, is more active than common mercurial ointment, and in such cases as require stimulating applications, it will answer better.

Many other applications are recommended, such as solutions of blue vitriol, verdigrease, calomel, with the spiritus nitri dulcis, and many others.

But as all of these are only of service in remedying any peculiar disposition of the parts, having no specific power on the true venereal action; and as such dispositions are innumerable, it becomes almost impossible to say what will cure every disposition; some will answer in one state of the sores, some in another. It may be found oftentimes that the parts affected are extremely irritable: in such cases it will be

the same immediate and visible effect is produced; for instance, if ten grains of ipecacuanha are thrown into the stomach of a dog, it will in a short time make it vomit, from its local applications to that viscus; and if a solution of five grains is thrown into a vein, it will produce vomiting before we can conceive it to have got to the vessels of the stomach. The same effects are produced from an infusion of jalap thrown into the veins that are commonly produced when taken into the stomach and bowels.

necessary to mix the mercury with opium, or perhaps preparations of lead, as white or red lead, to diminish the action of the parts.

The oftener the dressings are shifted, the better, as the matter from the sore separates the application from the diseased parts, by which means the effects are lost or diminished. Three times every day in many cases is not oftener than necessary, especially if the dressings are of the unctuous kind, for they do not mix like watery dressings with the matter, so as to impart some of their virtues to it, which would in a proportional degree affect the sore.

Chancres after having their venereal taint corrected often become stationary, and having acquired new dispositions increase the quantity of disease in the part, as will be taken notice of hereafter. When they become stationary only, they may often be cured by touching them slightly with the lunar caustic. They seem to require that the surface, which had been contaminated, or the new flesh which grew upon that surface, should be either destroyed or altered before it can cicatrise; and it is surprising often how fast they will heal after being touched, and probably once or twice may be sufficient.

III. OF THE TREATMENT OF PHYMOSIS IN CONSEQUENCE OF, OR ATTENDED WITH CHANCRE.

From the history which I have given of the disease we must see that a phymosis may be of two kinds, one natural, with the disease superadded, the other brought on by disease. The first may be increased by the disease; but if otherwise, it is not so troublesome as the other. Such as arise from the disease I have observed depend upon the peculiarity of the constitution. In either case it is often not practicable to apply dressings to the chancres on the inside of the prepuce.

A phymosis should be prevented if possible, therefore upon the least signs of a thickening of the prepuce, which is known by its being retracted with difficulty and pain, the patient should be kept quiet; if in bed so much the better, as in an horizontal position the end of the

penis will not be so depending, but may be kept up. If lying in bed cannot be complied with, then the end of the penis should be kept up to the belly if possible, but this can hardly be done when the person is obliged to walk about; for the extravasated fluids descending and remaining in the prepuce, contribute often more to render the prepuce incapable of being drawn back than the inflammation itself.

When the diseased phymosis completely takes place, the same precautions may be followed; but as the sores cannot be dressed in the common way, we must have recourse either to dressings in form of injections, or the operation for the phymosis. If injections only, they should be often repeated, as they are only temporary applications.

The dressings in form of injections should be mercurial, either crude mercury rubbed down with a thick solution of gum arabic, which will assist in retaining some of the injection between the glans and prepuce; or calomel with the same, with a proportion of opium. In the proportions of these no nicety is required; but if a solution of corrosive sublimate is made use of as an injection, some attention is to be paid to its strength. About one grain of this to an ounce of water will be as much as the sensation of the part will allow the patient to bear; and if this gives too much pain it may be lowered by adding more water.

After the parts are as well cleaned as possible with this injection, it will be necessary to introduce other mercurial applications of some kind to remain there till the parts want cleaning again, which will be very soon; such as are mentioned before will answer this purpose very well: but I have my doubts about the propriety of using any irritating medicines or injections in such cases.

Every time of making water the patient may wash the parts, by pressing the orifice of the prepuce together, so as to oblige the water to run back between the prepuce and glans; immediately after this the patient should use the mercurial applications, otherways this operation of washing may do harm, as it will be washing away the former application of mercury; but in many cases the parts are so sore as not to allow of this practice.

A poultice of linseed meal alone, or of equal parts of this and bread,

should be applied. This poultice is to be made with water, to which one-eighth of laudanum has been added. But previous to this, and immediately after the cleaning, it would be very proper to let the penis hang over the steam of hot water, with a little vinegar and spirits of wine in it, which is the neatest way of applying fomentations.

The oftener this is practised the better, as it is keeping a mercurial application in contact with the diseased parts a great number of the hours out of the twenty-four, than otherwise could be were the matter allowed to lie on the parts.

When to the abovementioned symptoms a bleeding of the chancre is added, I do not know a more troublesome complaint, because here the cells or veins have no great disposition for contraction.* Oil of turpentine gives the best stimulus for the contraction of vessels of all kinds; but where bleeding arises from an irritable action of the vessels, which is sometimes the case, then sedatives, such as opium, are the best applications. Whatever is used in such a state of the prepuce must be injected into the part.

When in consequence of the treatment the inflammation begins to go off, and the chancres to heal, it will be necessary to move the prepuce upon the glans as much as they will allow of, to prevent adhesions which sometimes happen, when there have been chancres on both surfaces opposite to each other. Indeed the practice here recommended is such as will in general prevent such consequences.

If this has not been properly attended to, and the parts have grown together, the consequences may not be bad; but it must be very disagreeable to the patient, and a reflection upon the surgeon.

I have seen the opening into the prepuce so much contracted from all these internal ulcers healing and uniting that there was hardly any passage for the water. If the passage in the prepuce so contracted be

* I suspect that where chancres bleed profusely, the blood comes either from the glans, when there are chancres there, or from the spongy substance of the urethra where the chancre has begun about the frænum, for we seldom see profuse bleedings from the prepuce when its inside is the seat of the chancre and can be exposed; but indeed in such cases the inflammation is not violent.

in a direct line with the orifice of the urethra, then a bougie may be readily passed; but this is not always the case: it often happens that they are not in a direct line, therefore an operation becomes necessary. The operation consists in either slitting up part of the prepuce, or removing part of it; but as these parts have become very indistinct from the adhesions, either the slitting it up, or removing part of it, becomes a difficult operation. Whenever the urethra is discovered, or can be found out by a bougie, that is to be introduced, and its application repeated till the passage becomes free and has got into the habit of keeping so.

I observed formerly that this tumefaction sometimes produced a confinement of the matter formed by the chancre, and that while this effect lasted no subsiding of the inflammation or tumefaction could take place; that therefore those diseases continued to exist, and that the part thus circumstanced came under our definition of an abscess; that is, the formation of matter in a state of confinement. Although it never has been considered in this light, yet the necessary treatment shows it to be such. This consists in laying it open from the external orifice to the bottom where the matter lies, as in a sinus, or fistula, so as to discharge it. However, the intention annexed to this practice was not to allow of the discharge of the matter of the sore, but to admit of the application of dressings to it, for it has been recommended and practised, where there was no particular confinement of matter, which I have not found to be necessary, merely for that purpose, as we are in possession of an internal remedy; and if the opening produces no other good, but the allowing of the application of dressings, it is not so material, because the sores may be washed with an injection through a syringe.

IV. OF THE COMMON OPERATION FOR THE PHYMOSIS PRODUCED BY CHANCRES.

The common operation for the phymosis is slitting the prepuce nearly its whole length, in the direction of the penis; but even this is sometimes thought not sufficient, and it is directed to cut the prepuce in two

different places, nearly opposite to one another. When it was thought proper to be done in this way, it was imagined that it was seldom necessary to cut the whole length of the prepuce. It will in some degree depend on circumstances, which practice is to be followed. If it is a natural phymosis without tumefaction, and the chancre is near the orifice of the prepuce, which in such cases it most probably will be, as the glans is not denuded in coition so as to have chancres deeper seated, then it may be necessary only to go as far as the chancres extend.

From the common situation of the chancre, this disease of the phymosis arises more commonly from the tumefaction of the parts; and from the idea I have endeavoured to give of the inconveniences arising from this phymosis, where the chancres are placed behind the corona, producing a confinement of the matter behind the glans, slitting open the prepuce a little way cannot be sufficient, for in such cases it must be exposed to the bottom, or no good can arise from the operation.

Although this operation will not take off the tumefaction of the prepuce so as to allow it to be brought back, yet it will allow of a free discharge of the matter, and also, in some cases, it will allow of dressings being applied to the sores, but not in all; for the tumefaction will not allow more of an inversion of the prepuce than before, and in such the sores cannot have dressings applied to them.

In many cases it will be found that so violent an operation is improper; for it often happens that, while the inflammation is so very considerable, there is danger of increasing it by this additional violence, of which mortification may be the consequence; while on the other hand, there are cases where a freedom given to the parts would prevent mortification; so that the surgeon must be guided by the appearances, and other circumstances. Besides these reasons for and against the operation, arising from the disease itself, it will not always be consented to by the patients themselves, for some have a dread of operations, and will not submit to cutting instruments. However, in those cases where the matter is confined, it will be absolutely necessary to have an opening somewhere for the discharge of it. This is often produced by the ulcerative process going on on the inside, which makes an opening

directly through the skin, laterally, which affords a direction for the surgeon; therefore the opening may be made directly into the cavity of the prepuce, through the skin, on the side of the penis, by a lancet; or a small caustic may be applied there, for which the lapis septicus is the most convenient.

The opening will allow of the discharge of the matter, and also admit any proper wash to be thrown in. But this opening should not be a large one, as in many cases the consequence of this lateral opening proves very troublesome, for from the tumefaction of the prepuce, the glans is squeezed on all sides, and rather more backwards upon the body of the penis than in any other direction, by which means it is often forced through this opening, whereby the glans is directed to one side, and the prepuce to the opposite, having a forked appearance. Besides, this state of the parts tightens the skin of the penis round the root of the glans, acting there somewhat like a paraphymosis, and sometimes makes the whole prepuce mortify and drop off, which is often a lucky circumstance; but if this is not the consequence, then amputation of the prepuce becomes necessary; however, this should not be done till all inflammation is gone off, and the chancres are cured, when, probably, the tumefaction of the prepuce will have considerably subsided.

A mortification of the prepuce is sometimes a consequence of chancres when attended with violent inflammation, even without any previous operation; and I have seen cases where the glans and part of the penis have mortified, while the prepuce has kept its ground. But I should suspect, in all such cases, that there is some fault in the constitution, and that the inflammation is of the erisypelatous, not of the true suppurative kind.

I have seen the mortification go so far as to remove the whole of the diseased prepuce; and the parts have taken on so favourable an appearance, that I have treated it as a common sore, and no bad consequences have happened. In this case the disease performed what is often recommended in other diseases of this part, that is circumcision; but this is not always to be trusted to; for if absorption of the venereal matter has

taken place previous to the mortification, a lues venerea will be the consequence, although the parts heal very readily.

V. OF THE CONSTITUTIONAL TREATMENT OF PHYMOSIS.

In those cases where violent inflammation has attacked the seat of a chancre, producing phymosis, as before described, and often so as to threaten a mortification, a question naturally occurs, what is to be done? Is mercury to be given freely to get rid of the first cause? or does that medicine increase the effect while it destroys the cause? Nothing but experience can determine this.

But I should incline to believe that it is necessary that mercury should be given, for I am afraid our powers to correct such a constitution, while the first cause subsists, are weak. However, on the other hand, I believe the mercury should be given sparingly; for if it assists in disposing the constitution to such symptoms, we are gaining nothing, but may lose by its use. I therefore do suppose that such medicines as may be thought necessary for the constitution, should be given liberally, as well as the specific. Bark is the medicine that probably will be of most general use; opium, in most cases of this kind, will also be of singular service.

The bark should be given in large quantities, and along with it mercury, while the virus is still supposed to exist. Or if the inflammation has arisen early in the disease, they may be then given together, so as to counteract both diseases, and not allow the inflammation to come to so great a height as it would otherwise do if mercury was given at first alone.

This inflammation may be so great in many cases, or be so predominant, that mercury may increase the disposition, and therefore become hurtful. Where this may be supposed to be the case, bark must be given alone.

VI. OF THE TREATMENT OF THE PARAPHYMOSIS FROM CHANCRES.

A prepuce in the state of inflammation and tumefaction, and which has been either kept back upon the body of the penis while inflaming, or pulled back when inflamed, seldom can be again brought forwards while in this state, therefore becomes also the subject of an operation, which consists in dividing the same part as in the phymosis, only in a different way, arising from its difference of situation; the intention of which operation is to bring the prepuce, when brought forwards, to the state of a phymosis that has been operated upon. This operation becomes more necessary in many cases under this disease than under the phymosis, because its consequences are generally worse; since, besides the real disease, viz. inflammation, tumefaction, ulceration, &c. there is a mechanical cause producing its effects, by grasping the penis, which can of itself produce inflammation where the prepuce is naturally tight, as has been observed. From whatever cause it arises, it often produces mortification in the parts between the stricture and the glans if it is not removed. This removal sometimes happens naturally, by the ulceration of the strictured part; but an operation is generally necessary; and it is more troublesome than in the former case, because the swelling on each side of the stricture covers or closes in upon the tight part, and makes it difficult to be got at.

The best way appears to be, to separate the two swellings as much as possible where you mean to cut, so as to expose the neck, then take a crooked bistory which is pointed, and passing it under the skin at the neck, divide it: no part of the two swellings on the sides need be divided, for it is the looseness of the skin in these parts which admits of their swelling. When this is done, the prepuce may be brought forwards over the glans; but as this disease arose from chancres which may require being dressed, and as the state of a phymosis is a very bad one for such treatment, it may be better now that the stricture is removed, to let it remain in the same situation till the whole is well.

If the paraphymosis has arisen from a natural tightness of the prepuce, and its being forced back from accident, then no particular treatment after the operation is necessary, but to go on with the cure as recommended in chancres. It is indeed probable that, in consequence of the violence produced by the position of the prepuce, as also by the operation, a considerable inflammation may ensue; but as this will be an inflammation in consequence of violence only, local treatment for the inflammation will be sufficient, such as fomentations, poultices, &c.

But if it is a paraphymosis in consequence of a diseased phymosis, then the same mode of treatment becomes equally necessary as was recommended in the phymosis attended with considerable inflammation; and probably rather more attention is necessary here, as violence has been added to the former disease.

VII. OF THE CURE OF CHANCRES BY MERCURY GIVEN INTERNALLY.

While chancres are under local treatment, as before described, it is necessary to give mercurials internally, both for the cure of a chancre and the prevention of a lues venerea; and we may reasonably venture to affirm, that the venereal disposition of chancre will hardly ever withstand both local and internal mercurials.

In cases of chancres where local applications cannot easily be made, as in cases of phymosis, internal mercurials become absolutely necessary; and more so than if they could be conveniently and freely applied externally. However, even in such cases, internal mercurials will in the end effect a cure; so that we need seldom or ever be under any apprehension of not curing such a disease.

In every case of a chancre, let it be ever so slight, mercury should be given internally; even in those cases where they were destroyed on their first appearance. It should in all cases be given the whole time of the cure, and continue for some time after the chancres are healed; for as there are, perhaps, few chancres without absorption of the matter,

it becomes absolutely necessary to give mercury to act internally, in order to hinder the venereal disposition from forming.

When chancres are attended with a great degree of inflammation, and swelling of the neighbouring lymphatic glands, there are peculiarities in the constitution which are unfavourable to the use of mercury; it should therefore, in such cases, be used with caution, and joined with such medicines as will make it less irritating to the constitution.

How much mercury should be thrown into the constitution in the cure of a chancre, for the prevention of the constitutional affection, is not easily ascertained: as there is in such cases no disease actually formed so as to be a guide, it must be uncertain what quantity should be given internally. It must, in general, be according to the size, number, and duration of the chancres. If large, we may suppose that the absorption will be proportioned to the surface, and if long continued, the absorption will be according to the time; and if they have been many, large. and continued long, then the greatest quantity is necessary.

The circumstances, therefore, attending the chancre, must be the guide for the safety of the constitution, especially in those cases where some stress in the cure is laid upon the external remedy.

The mercury given to act internally, must be thrown in either by the skin or stomach, according to circumstances.

The quantity, in either way, should be such as may in common affect the mouth slightly; which method of giving mercury will be considered hereafter.

When the sore has put on a healthy look, when the hard basis has become soft, and it has skinned over kindly, it may be looked upon as cured.

But in very large chancres, it may not always be necessary to continue the application of mercury, either for external or internal action, till the sore is healed; for the venereal action is just as soon destroyed in a large chancre as it is in a small one; for every part of the chancre being equally affected by the mercury, is equally easily cured. But the skinning is different; for a large sore is longer in skinning than a small one. A large chancre, therefore, may be deprived of its venereal action

long before it is skinned over; but a small one may probably skin over before the venereal action is entirely subdued. In the latter case, both on account of the chancre and constitution, it will be erring on the safe side to continue the medicine a little longer, which will most certainly in the end effect a cure: for we may reasonably suppose, that the quantity of mercury capable of curing a local effect, although assisted by local applications, or of producing in the constitution a mercurial irritation sufficient to hinder the venereal irritation from forming, will be nearly as much as will cure a slight lues venerea.

I have formerly laid it down as a principle, that no new action will take place in another part of the body, however contaminated, whilst the body is under the beneficial operation of mercury; but there are, now and then, appearances which occur under the cure, that will at first embarrass the practitioner. I have suspected, that the mercury flying to the mouth and throat has sometimes produced sloughs in the tonsils, and these have been taken for venereal. The following cases, in some degree, explain this.

A young gentleman had a chancre on the prepuce, with a slight pain in a gland of one groin, for which I ordered mercurial ointment to be rubbed into the legs and thighs, especially on the side where the gland was swelled, and the chancre to be dressed with mercurial ointment. While he was pursuing this course the chancre became cleaner, the hardness at the base went off, and the pain in the groin was entirely removed. About three weeks after the first appearance of the disease he was attacked with a sore throat, and on looking into the mouth I found the right tonsil with a white slough, which appeared to be in its substance, with only one point yet exposed. From my mind being warped by the opinion that these complaints proceeded from the chancre, I immediately suspected that it was venereal; and the only way I could account for this seeming contradiction, in one part healing while another was breaking out, was, that the healing sore was treated locally as well as constitutionally, while the tonsil, or the constitution at large, was only treated constitutionally, which was insufficient.

Soon after this, another gentleman was under my care for venereal

scurfs, or eruptions on his skin, for which he used mercurial frictions till his mouth became sore; and in this state he continued for three weeks, in which time the eruptions were all gone, discolourations being left only where the eruptions had been, yet at the end of three weeks a slough formed in one of the tonsils, exactly as in the former case. This made me doubtful how far such cases were venereal. I ordered the friction to be left off, to see what course the ulcers would take: the slough came out and left a foul sore: I waited still longer, and in a day or two it became clean, and healed up.

The first mentioned case I did not see to an end; but I learned that the patient continued the mercury, and got well; and the ulcer in the throat was supposed to be venereal; but from the circumstances of the other case I now very much doubt if it was so.

It is more than probable that these effects of mercury only take place in constitutions that have a tendency to such complaints in the throat. I know this to be the case with the last mentioned gentleman; and it is also probable that there may be an increased disposition at the time, either in consequence of the mercury, or some accidental cause. I have reason to suppose that mercury in some degree increases this disposition, which will be further taken notice of when treating of the cure of the lues venerea.

In the cure of chancres, I have sometimes seen when the original chancre has been doing well, and probably nearly cured, that new ones have broken out upon the prepuce, near to the first, and have put on all the appearance of a chancre; but such I have always treated as not venereal. They may be similar to some consequences of chancres, which will be taken notice of hereafter.

As swellings of the absorbent glands take place in consequence of other absorptions besides poisons, we should be careful in all cases to ascertain the cause, as has been already described. And here it may not be improper still to observe further, that in the cure of chancres, swellings of the glands shall arise, even when the constitution is so much loaded with mercury as to be sufficient for the cure of the sores; but then the mercury has been thrown into the constitution by the lower

extremity; and therefore there is great room for suspicion that such swellings are not venereal, but arise from the mercury; for a real bubo, from absorption of venereal matter, if not come to suppuration, will give way to mercury rubbed into the leg and thigh. In such cases I have always desisted from giving the mercury in this way when I could give it by the mouth.

CHAPTER IV.

OF THE CURE OF CHANCRES IN WOMEN.

The parts generally affected with chancres in this sex, are more simple than in men, by which means the treatment in general is also more simple; but in most cases they require nearly the same, both in the local application of mercury, and in throwing it into the constitution. It may be supposed, however, that it will be necessary, in many cases, to throw into the constitution more mercury than in men, because, in general, there are more chancres, and the surface of absorption of course larger.

As it is difficult to keep dressings on the female parts, it is proper they should be washed often with solutions of mercury; perhaps corrosive sublimate is one of the best, as it will act as a specific, and also as a stimulant when that is wanted; but in chancres that are very irritable, the same mode of treatment as was recommended in men is to be put in practice. Afterwards the parts may be smeared with a mercurial application, either oily or watery, to be frequently repeated according to the circumstances of the case.

If the ulcers should have spread, or run up the vagina, great attention should be paid to the healing of them; for it sometimes happens that the granulations contract considerably, so as to draw the vagina into a small canal; at other times the granulations will unite into one another and close the vagina up altogether; therefore, in such cases, it will be necessary to keep some substance in the vagina till the sores are skinned, for which purpose probably lint may be sufficient.

CHAPTER V.

OF SOME OF THE CONSEQUENCES OF CHANCRES — AND THEIR TREATMENT.

After the chancres have been cured, and all venereal taint removed, it sometimes happens that the prepuce still retains a considerable degree of tumefaction, which keeps up the elongation and tightness it acquired from the disease, so that it cannot be brought back upon the penis to expose the glans.

For this, perhaps, there is in many cases no cure; however, it is necessary to try every possible means. The steam of warm water is often of singular service in these cases; fomentations with hemlock, and also fumigations with cinnabar.

But if the parts still retain their size and form, it may be very proper to remove part of the overgrown prepuce; how much, must be left to the discretion of the surgeon; however, I should suppose that all that part which projects beyond the glans penis may be cut away.

The best way of removing it is by the knife; but great care should be taken to distinguish first the projecting prepuce from the glans. When this is perfectly ascertained, an incision may be made on the upper surface, the penis being held horizontally, and followed down carefully; because if the incision should be too near the glans, there may be danger of cutting it.

The parts may be allowed to heal with any common dressings, as it is to be considered as a fresh wound; however, it will not heal so readily as a fresh wound made in an entirely sound part, because the operation consists in taking away only a superfluous part of a diseased whole, and what is left is diseased, but not so as to produce any future mischief.

Some care may be necessary in the healing of the parts; for it is very

possible that the cicatrix may contract, and still form a phymosis. This will be best prevented by the patient himself bringing the prepuce often back upon the penis; but it should not be attempted till the part is nearly healed; and it is to be performed with great care, and slowly.

I. OF DISPOSITIONS TO NEW DISEASES TAKING PLACE DURING THE CURE OF CHANCRES.

Chancres, both in men and women, often acquire new dispositions and modes of action in the time of the cure, which are of various kinds, some of which retard the cure, as described; and when the parts are cured, leave them tumefied and indolent, as in the enlarged prepuce. In others a new disposition takes place, which prevents the cure or healing of the parts, and often produces a much worse disease than that from which it arose. They also become the cause of the formation of tumors on these parts, which will be taken notice of hereafter.

Such new dispositions take place oftener in men than in women, probably from the nature of the parts themselves. They seldom or never happen but when the inflammation has been violent, which violence arises more from the nature of the parts than the disease, and therefore belongs more to the nature of the parts or constitution than to the disease; however, I can conceive it may also take place where the inflammation has not been violent, although I can hardly say I have ever seen it.

In general, they are supposed to be cancerous, but I believe they seldom are, although it is not impossible somemay be so.

Of this kind may be reckoned those continued and often increased inflammations, suppurations, and ulcerations, becoming diffused through the whole prepuce, as also all along the common skin of the penis, which becomes of a purple hue; the cellular membrane every where on the penis is very much thickened, so as to increase the size of the whole considerably.

The ulceration on the inside of the prepuce will sometimes encrease and run between the skin and the body of the penis, and eat holes through

in different places, till the whole is reduced to a number of ragged sores. The glans often shares the same fate till more or less of it is gone; frequently the urethra at this part is wholly ulcerated away, and the urine comes out some way further back. If a stop is not put to the progress of the disease, the ulceration will continue till the parts are entirely destroyed. I suspect that some of there cases are scrofulous.

As this is an acute case, immediate relief should be given if possible; as it may arise from various peculiarities in the constitution, and as these peculiarities are not at first known, no rational method can be here determined. The sarsaparilla is often of service in such cases, but requires to be given in large quantities.

The German diet-drink * has been of singular service; I knew a case of this kind cured by it, after every known remedy had been tried.

The extract of hemlock is sometimes of service. I have known sea-bathing cure these complaints entirely.

A gentleman came from Ireland with a complaint of this kind, and after trying every common, and known method, without effect, as sarsaparilla, hemlock, German diet-drink; and after having used a great variety of dressings, which were all at last laid aside, and opium only retained to quiet the pain, he went afterwards and bathed in the sea, and got well.

It may be sometimes necessary to pass a bougie, to hinder the orifice of the urethra from closing or becoming too small in the time of healing in such cases.

* The following formulæ have been much recommended as diet-drinks. Take of crude antimony pulverized tied up in a bit of rag; pumice stone pulverized tied up in the same, of each one ounce; China root sliced; sarsaparilla root sliced and bruised, of each half an ounce; ten walnuts with their rinds bruised; spring water four pints, boiled to half that quantity; filter it, and let it be drank daily in divided doses.

Take sarsaparilla, Sanders wood, white and red, of each three ounces; liquorice and mezereon, of each half an ounce; lign. rhodii, guiac, sassafras, of each one ounce; crude antimony, two ounces; mix them and infuse them in boiling water, ten pints, for twenty-four hours; and afterwards boil them to five pints, of which let the dose be from a pint and an half to four pints a day.

II. OF ULCERATIONS RESEMBLING CHANCRES.

It often happens that after chancres are healed, and all the virus gone, the cicatrices ulcerate again, and break out in the form of chancres.

Although this is most common in the seat of the former chancres, yet it is not always confined to them, for sores often break out on other parts of the prepuce; but still they appear to be a consequence of a venereal complaint having been there, as they seldom attack those who never had gonorrhœa or chancres. They often have so much the appearance of chancres, that I am persuaded many are treated as venereal that are really not such: they differ from a chancre in general by not spreading so fast, nor so far; they are not so painful, nor so much inflamed, and have not those hard bases that the venereal sores have, nor do they produce buboes; yet a malignant kind of them, when they attack a bad constitution, may be taken for a mild kind of chancre, or a chancre in a good constitution. I have seen several that have puzzled me extremely.

Some stress is to be laid upon the account that the patient gives of himself; but when there is any doubt, a little time will clear it up. I have seen the same appearances after a gonorrhœa; but that more rarely happens. It would appear that the venereal poison could leave a disposition for ulceration of a different kind from what is peculiar to itself. I knew once case where they broke out regularly every two months, exactly to a day,

As they are not venereal, their treatment becomes difficult; for the cure consists more in preventing a return, than in the healing up of the present sores.

They require particular attention; for although they are not dangerous, they are often troublesome, keeping the mind in suspense for months.

I have tried a great variety of means, but with little success; yet they have in general got well in the end. In the following case, the lixivium saponarium produced a speedy cure.

A gentleman had three sores broke out on the prepuce, which had

very much the appearance of mild chancres. As I was doubtful of their nature, I waited some time, and only ordered them to be kept clean. As they did not get well, several things were tried. Mercurial dressings were applied, but they always produced considerable irritation, and it was necessary to leave them off. The mercurius calcinatus was given by way of trial, and to secure the constitution, but the sores continued the same. They were eat down with the lunar caustic, which appeared to have a better effect than any other thing tried; but still they were not healed at the end of five months. I ordered forty drops of the lixivium tartari to be taken every evening and morning in a bason of broth. After using it three days he observed a considerable alteration in the sores, and in six they were perfectly skinned over. He had formerly had such sores often, which had always been treated as venereal; but he began to doubt whether they really were so, from their getting so soon well in the present instance by the lixivium.

I knew a gentleman who had these sores breaking out and healing again for years, and by bathing in the sea for a month or two they healed up and never afterwards appeared.

III. OF A THICKENING AND HARDENING OF THE PARTS.

In some cases the parts do not ulcerate, but appear to thicken, and become hard or firm; both the glans and prepuce seem to swell, forming a tumor or excrescence from the end of the penis, in form a good deal like a cauliflower, and when cut into showing radii running from its base, or origin, towards the external surface, becoming extremely indolent in all its operations. This gives more the idea of a cancer than the first, being principally a new-formed substance. However, it is not always a consequence of the venereal disease; I have known it to arise spontaneously.

This disease appears to be a tumor of so indolent a kind, that I do not know any medicine that stands the least chance of performing a cure. I have amputated them, and have also seen the same thing done by

others, from the idea of their being cancerous, and the remaining part of the penis has healed kindly.

In most of these cases a considerable part of the penis must be removed. Immediately after the amputation, a suitable catheter should be introduced into the urethra; for if no such precaution is made use of, the consequences must be troublesome; for the first dressings become cemented to the orifice by the extravasated blood, and prevent the patient's making water, which must be attended with obvious inconveniences; this was the case with a patient whose penis I amputated.

IV. OF WARTS.

Another disposition which these parts acquire from the venereal poison is the disposition to form excrescences, or cutaneous tumors, called warts. This disposition is strongest where the chancres were; and indeed chancres often heal into warts; but perhaps the parts acquire this disposition from the venereal matter having been long in contact with their surfaces; for it often happens after gonorrhœas where there had been no chancres; and probably it is only in those cases where the venereal matter had produced the venereal stimulus upon the glans and prepuce, forming there what may be called an insensible gonorrhœa.

A wart appears to be an excrescence from the cutis, or a tumor forming upon it, by which means it becomes covered with a cuticle, which like all other cuticles, is either strong and hard, or thin and soft, just as the cuticle is which covers the parts from whence they arise. They are radiated from their basis to the circumference, the radii appearing at the surface pointed or granulated, much like granulations that are healthy, except that they are harder, and rise above the surface. It would appear that the surface on which each is formed has only the disposition to form one, because the surrounding and connecting surface does not go into the like substance; thus a wart once begun does not increase in its basis, but rises higher and higher. They have an in-

creasing power within themselves; for after rising above the surface of the skin, on which they are not allowed to increase in breadth at the basis, they swell out into a round thick substance which becomes rougher and rougher.

This structure often makes them liable to be hurt by bodies rubbing against them; and often from such a cause they bleed very profusely, and are very painful.

These excrescences are considered by many not as simply a consequence of the venereal poison, but as possessed of its specific disposition, and therefore they have recourse to mercury for the cure of them; and it is asserted that such treatment often removes them. Such an effect of mercury I have never seen, although given in such a quantity as to cure in the same person recent chancres, and sometimes a pox.

As these substances are excrescences from the body, they are not to be considered as truly a part of the animal, not being endowed with the common or natural animal powers, by which means the cure becomes easier. They are so little of the true animal, and so much of a disease, that many trifling circumstances make them decay; an inflammation in the natural and sound parts round the wart will give it a disposition to decay; many stimuli applied to the surface will often make them die. Electricity will produce action in them which they are not able to support; an inflammation is excited round them, and they drop off.

From this view of them, the knife and escharotics must appear not always necessary, although these modes will act more quickly than any other in many cases, especially if the neck is small. In such formed warts perhaps a pair of scissars is the best instrument; but where cutting instruments of any kind are horrible to the patient, a silk thread tied round its neck will do very well; but in whichsoever way it is separated it will be in general necessary to touch the base with caustic.

Escharotics act upon warts in two different ways, one by deadening part and stimulating the remainder, so that by applying escharotic after

escharotic, the whole decays tolerably fast; and it is seldom necessary to eat them down to the very root, as the basis or root often separates and is thrown off. This however is not always the case, for we find that the root does not always separate, and that it will grow again; therefore in such cases it is necessary to eat down lower than the general surface to remove the root.

Any of the caustics, such as the lapis septicus, as also the metallic salts, such as the lunar caustic, blue vitriol, &c. have this power. Merely as stimulants, the rust of copper and savine leaves mixed is one of the best.

After they have been to appearance sufficiently destroyed, they often rise anew, not from any part being left, but from the surface of the cutis having the same disposition as before; this requires a repetition of the same practice, so as to take off that surface of the cutis.

V. OF EXCORIATIONS OF THE GLANS AND PREPUCE.

It very often happens that the surface of the glans and inside of the prepuce excoriate, becoming extremely tender, and then a matter oozes out. The prepuce in such cases often becomes a little thickened, and sometimes contracts in its orifice, both of which render the inversion of it difficult and painful. Whether this complaint ever arises from a venereal cause is not certain, as it often takes place where there never has been any venereal taint.

This disease is in the cutis; and under such a disposition it has no power of forming a good cuticle. It is very similar to a gonorrhœa in this part, but is not venereal.

Drawing the prepuce back, and steeping the parts in a solution of lead, often takes off the irritation, and a sound cuticle is formed. Spirits diluted often produce the same affect; the unguentum citrinum of the Edinburgh Dispensatory, lowered by mixing with it equal parts of hog's lard, is often of singular service in such cases; but there are cases which bid defiance to all our applications, in which I have succeeded

by desiring the person to leave the glans uncovered, which produced the stimulus of necessity for the formation of a natural cuticle.

The Editor found that the unguentum citrinum is readily decomposed by the heat necessarily employed in rubbing it down with an additional portion of hog's lard, and his friend Mr. William Brande made this ointment of the different degrees of strength in the original formation of the ointment, which proves to be a much more efficacious application than when diluted in the common way.

PART V.

CHAPTER I.

OF BUBO.

A KNOWLEDGE of the absorbing system, as it is now established, gives us considerable information respecting many of the effects of poisons, and illustrates several symptoms of the venereal disease, in particular the formation of buboes. Prior to this knowledge we find writers at a loss how to give a true and consistent explanation of many of the symptoms of this disease. The discovery of the lymphatics being a system of absorbents has thrown more light on many diseases than the discovery of the circulation of the blood; it leads in many cases directly to the cause of the disease.

The immediate consequence of the local diseases gonorrhœa and chancre, which is called bubo, as also the remote, or lues venerea, arise from the absorption of recent venereal matter from some surface where it has either been applied or formed. Although this must have been allowed in general ever since the knowledge of the disease and of absorption, yet a true solution of the formation of bubo could not be given till we had acquired the knowledge of the lymphatics being the only absorbents. Upon the old opinion of absorption being performed by the veins, the lues venerea could have easily been accounted for, because it could as readily be produced by the absorbing power of the veins, if they had such, as by the lymphatics; but the difficulty was to say how the bubo was formed. There they seemed to be at a loss to account for this disease, yet they sometimes expressed themselves as if they had some idea of it, although at the same time they could have

no clear notions of what they advanced; nor could they demonstrate what they said from the knowledge of the parts and their uses.

Buboes are by some imputed to the stopping of a gonorrhœa, or as they expressed it, driving it to the glands of the groin, conformably to the idea they had of the cause of the swelling of the testicle. But this is not just, for we know of no such power as repulsion; and if it was driven there it could not be by stopping the formation of matter, but by increasing the absorption, of which they had no idea.

When we examine the opinions of authors concerning the formation of bubo, prior to the knowledge of the power of absorption in the lymphatics, we shall find them making use of terms which they could not possibly understand. For instance, Heister says, "They are of two kinds, one venereal, and the other not;" but he does not say that the venereal arises only from impure coition.

Astruc says, page 326, that some buboes arise immediately from impure coition, and these he calls essential; others from suppressed gonorrhœa, or a small discharge or from chancres of the penis, and these he calls symptomatic; lastly, that they arise spontaneously without any immediate previous coition, and are a pathognomonic sign of a hidden pox.

In page 327 he shows the impossibility of this last happening from what we now call or understand by lues venerea; but in page 328 he explains what he calls a latent lues venerea, which is local affections produced, as he supposes, from a lues venerea; but which most probably never yet happened; and if ever they had arisen from such a cause, even the absorption of their matter could not produce a venereal bubo, as will be explained. In short, from not knowing the true absorbing system, his ideas are become now unintelligible.*

We find Cowper, Drake, and Boerhaave, as well as Astruc, speaking of the vitiated lymph not passing the glands, therefore inflaming them; also of the inspissated lymph passing either by the circulation of the blood, that is, from the constitution to these glands, (an opinion held by

* The above extracts are from the English edition, published in the year 1754, page 326.

some to this day) or by a shorter course, viz. the lymphatic vessels which go to the inguinal glands. They also speak of the swelling of the inguinal glands, or venereal buboes, from the contagion being communicated by the resorbent lymphatics. Drake even speaks more pointedly, and if we considered him no further, he would almost make us believe that he knew that the lymphatics were the absorbents; but as he has no such ideas when treating of those vessels expressly, we are not to give him credit for it. His words are, "The venereal bubo may very likely take its rise from some parts of the contagious matter of claps sucked up by the lymphatics of the penis, and thence imported to the inguinal glands where they deposit their liquor; and thence it well behoves the surgeon to be as early as may be in the opening of such tumors, before by the exporting vessels of that class the poison is carried further into the blood, which very probably may be the case where such tumor ariseth immediately upon the stopping of a gonorrhœa, as does the hernia humoralis; but when the same appears some months after that was removed, we are to suppose as in cases of other poisons laying hold of the blood, by the strength of nature it is thrown forth, either by means of the lymphatics of the blood vessels themselves, if not spewed out of the nervous tubes, as Wharton surmised, and deposited in these emunctories."

Here he compares it to the formation of a hernia humoralis, which plainly shows that he understood neither of them.

Even so late as the year 1748, we do not find any new ideas on this subject: Freke says, "By sealing up the mouths of the glands of the urethra, the poison is thence by the ducts leading to the inguinal glands conveyed to them."

In the year 1754, eight years after Dr. Hunter having publicly taught his opinion of the lymphatics being a system of absorbents, we find a treatise on this disease by Mr. Gataker, where as little new is advanced on this subject, as in any of the former.

When we come so low down as the year 1770, in an abridgement of Astruc by Dr. Chapman, (second edition) in which he introduces his own knowledge and ideas, we find the absorbing power of the lymphatics

brought in as a cause of the formation of buboes; but by this time the knowledge of the lymphatics being the system of absorbents was in this country generally diffused.

The doctrine of absorption being now perfectly understood, we have only to explain the different modes in which it may take place.

The venereal matter is taken up by the absorbents of the part in which it is placed; and although the absorption of the matter and the effects after absorption are the same, whether from the matter of the gonorrhœa or chancre, yet I shall divide the absorption into three kinds, according to the three different surfaces from which the matter may be absorbed, beginning with the least frequent.

The first and most simple is where the matter either of a gonorrhœa or chancre has only been applied to some sound surface, without having produced any local effect on the part, but has been absorbed immediately upon its application. Instances of this I have seen in men, and such are perhaps the only instances that can be depended upon; for it is uncertain in many cases, whether a woman has a gonorrhœa or not. I think however I may venture to affirm that I have seen it in women, or at least there was every reason to believe that they had neither chancre, nor gonorrhœa preceding, as there was no local appearance of it, nor did they communicate it to others who had connection with them.

It must be allowed that this mode of absorption is very rare; and if we were to examine the parts very carefully, or inquire of the patient very strictly, probably a small chancre might be discovered to have been the cause, which I have more than once seen. For when we consider how rarely it happens from a gonorrhœa, in which the mode of absorption is similar, we can hardly suppose it probable that it should here arise from simple contact, the time of the application of the venereal matter being commonly so very short. We might indeed suppose the frequency to make up for the length of time, which we can hardly allow, for the same frequency should give the chance of producing it locally. Therefore very particular attention should be paid to all the circumstances attending such cases.

There is however no great reason why it should not happen, and the

possibility of it lessens the faith that is to be put in the supposition, that the disease may be years in the constitution before it appears; for whenever it does appear in a lues venerea, its date is always carried back to the last local affection, whether gonorrhœa or chancre, and the latter connections are never regarded.

The second mode of absorption of this matter is more frequent than the former, and it is when the matter applied has produced a gonorrhœa; and it may happen while the complaint is going on, either under a cure or not. Some of the matter secreted by the inflamed surfaces having been absorbed and carried into the circulation, produces the same complaints as in the former case, by which means a person gives himself the lues venerea.

The third mode is the absorption of the matter from an ulcer, which may either be a chancre or a bubo. This mode is by much the most frequent; which with many other proofs would show that a sore, or ulcer, is the surface most favourable for absorption. Whether ulcers in every part of the body have an equal power of absorption I have not been able to determine; but I suspect that an ulcer on the glans, is not so good a surface for absorption as one on the prepuce, although I have seen both buboes and the lues venerea arise from the former, but not so often as from the latter.

To these three methods may be added a fourth, absorption from a wound, which I have already remarked is perhaps not so frequent as any of the former.

As the venereal poison has the power of contaminating whatever part of the body it comes in contact with, it contaminates the absorbent system, producing in it local venereal complaints. It is hardly necessary to observe, that what is now commonly understood by a bubo, is a swelling taking place in the absorbing system, especially in the glands, arising from the absorption of some poison, or other irritating matter; and when such swellings take place in the groin, they are called buboes, whether from absorption or not, but are most commonly supposed to be venereal, even although there has been no visible preceding cause. This has been so much the case, that all swellings in this part have been

suspected to be of this nature; femoral ruptures, and aneurisms of the femoral artery have been mistaken for venereal buboes.

I shall call every abscess in the absorbing system, whether in the vessels or the glands, arising in consequence of the absorption of venereal matter, a bubo.

This matter, when absorbed from either of the four different surfaces, which are common surfaces, wounds, inflamed surfaces, and ulcers, is carried along the absorbent vessels to the common circulation, and in its passage often produces the specific inflammation in these vessels; the consequence of which is the formation of buboes, which are venereal abscesses, exactly similar in their nature and effects to a chancre; the only difference being in size. As the absorbents with the glands are immediately irritated by the same specific matter which has undergone no change in its passage, the consequent inflammation must therefore have the same specific quality, and the matter secreted in them be venereal.*

As this system of vessels may be divided into two classes, the vessels themselves, and their ramifications and convolutions called the lymphatic glands, I shall follow the same division in treating of their inflammations.

Inflammation of the vessels is not nearly so frequent as that of the glands. In men such inflammations in consequence of chancres upon the glans or prepuce generally appear like a chord leading along the back of the penis from the chancres. Sometimes they arise from the thickening of the prepuce in gonorrhœas, that part in such cases being generally in a state of excoriation, as was described when on that form of the disease. These chords often terminate insensibly on the penis, near its root, or near the pubes; at other times they extend further, passing to a lymphatic gland in the groin: this chord can be easily pinched up between the finger and thumb, and it often gives a thick-

* I do not know how far this reasoning will hold good in all cases of poisons, for I very much suspect that the bubo that is sometimes formed in consequence of inoculation of the small pox does not produce variolous matter; the natural poisons in producing buboes certainly do not form a poison similar to themselves.

ness to the prepuce, making it so stiff at this part as to make the inversion of i difficult, if not impossible, producing a kind of phymosis.

I think I have observed this appearance to arise as frequently from the gonorrhœa, when attended with the beforementioned inflammation and tumefaction of the prepuce, as from chancres; which, if my observation is just, is not easily accounted for. I have observed, that absorption is more common to ulcers than inflamed surfaces: or at least the formation of a bubo in the gland, and its effects in the constitution, are more common from an ulcer; but it may be remarked, that the inside of the prepuce, from whence this chord appears to arise, is in an excoriated state. It is possible that this effect may arise from the lymphatics sympathising with the inflammation of the urethra, but I believe the affection is truly venereal; or it is possible that even the absorption of the coagulable lymph which was produced from the venereal inflammation, and which is the cause of the tumefaction, may have the power of contamination, as appears to be the case in the cancer.

The thickening, or the formation of this hard chord, probably arises from the thickening of the coats of the absorbents, joined with the extravasation of coagulable lymph, thrown in upon its inner surface, as in inflamed veins.

This chord often inflames so much as to suppurate, and sometimes in more places than one, forming one, two, or three buboes, or small abscesses in the body of the penis. When this is going on, we find in some parts of this chord a circumscribed hardness, then suppuration takes place in the centre, the skin begins to inflame, the matter comes nearer to it, and the abscess opens like any other abscess.

I have seen a chain of these buboes, or little abscesses, along the upper part of the penis through its whole length.

This may be supposed to be exactly similar to the inflammation and suppuration of a vein after being wounded and exposed.

Inflammation of the glands is much more frequent than the former, and arises from the venereal matter being carried on to the lymphatic glands; the structure of which appears to be no more than the ramifi-

cations and reunion of the absorbent vessels, by which means they form these bodies.

From this structure, we may reasonably suppose that the fluid absorbed is in some measure detained in these bodies, and thereby has a greater opportunity of communicating the disease to them than to the distinct vessels, where its course is perhaps more rapid; which may account for the glands being more frequently contaminated.

Swellings of these glands are common to other diseases, and should be carefully distinguished from those that arise from the venereal poison. The first enquiry should be into the cause, to see if there is any venereal complaint at some greater distance from the heart, as chancres on the penis, or any preceding disease on the penis; to learn if mercurial ointment has been at all applied to the legs and thighs of that side; for mercury applied to those parts for the cure of a chancre will sometimes tumefy the glands, which has been supposed to be venereal. We should further observe, if there be no preceding disease in the constitution, such as cold, fever, &c. the progress of the swelling with regard to quickness is also to be attended to, as also to distinguish it from a rupture, lumbar abscess, or aneurism of the crural artery.

Perhaps these bodies are more irritable, or more susceptible of stimuli than the vessels, they are certainly more susceptible of sympathy; however, we are not yet sufficiently acquainted with the use of these glands to be able to account satisfactorily for this difference.

It would appear in some cases, that it is some time after the absorption of the venereal matter before it produces its effects upon the glands; in some it has been six days at least. This could only be known by the chancres being healed six days before the bubo began to appear; and in such cases it is more than probable that the matter had been absorbed a much longer time before, for the last matter of a chancre most probably is not venereal; and indeed it is natural to suppose that the poison may be as long before it produces an action on the parts, when applied in this way, as it is either in the urethra, or in forming a chancre, which I have shown to be sometimes six or seven weeks.

The glands nearest to the origin of the disease are in general the only ones that are attacked, as those in the groin, when the matter has been taken up from the penis in men. In the groin, between the labia and thigh, and the round ligaments, when absorbed from the vulva, in women.

I think there is commonly but one gland at a time that is affected by the absorption of venereal matter, which if so, becomes in some sort a distinguishing mark between venereal buboes and other diseases of these bodies.

We never find the lymphatic vessels, or glands, that are second in order, affected; as those along the iliac vessels, or back; and I have also seen when the disease has been contracted by a sore, or cut upon the finger, the bubo come on a little above the bend of the arm, upon the inside of the biceps muscle; and in such, where the bubo has come in that part, none have formed in the arm-pit, which is the most common place for the glands to be affected by absorption.

But this is not universal, although common, for I was informed by a gentleman who contracted the disease in the beforementioned way, that he had buboes both on the inside of the biceps muscle, and in the arm-pit. Another case of this kind I have heard of since; why it is not more common, is perhaps not easily explained.

It might be supposed that the matter was weakened, or much diluted by the absorptions from other parts, by the time it gets through these nearest ramifications, and therefore has not power to contaminate those which are beyond them; but it is most probable that there are other reasons for this. I once suspected that the nature of the poison was altered in these glands as it passed through them, which was the reason why it did not contaminate the second or third series of glands; and also why it did not affect the constitution in the same way as it did the parts to which it was first applied; but this explanation will not account for the next order of glands to suppurating buboes not being affected by the absorption of venereal matter. It appears to me, that the internal situation of the other glands prevents the venereal irritation from taking place in them; and this opinion is strengthened, by observing when one

of these external glands suppurates and forms a bubo, which is to be considered as a large venereal sore or chancre, that the absorption from it, which must be great, does not contaminate the lymphatics or glands next in order, by the venereal matter going directly through them.

If this be true, then the skin would seem to be the cause of the susceptibility of the absorbents to receive the irritation. Whether the skin has the power inherent in itself, or acquires it from some other circumstance, as air, cold, or sense of touch, is not easily ascertained, but which ever it be, it shows that the venereal matter of itself is not capable of irritating, and that it requires a second principle to complete its full effect; that is, a combination of the nature of the poison and the influence of the skin, and that influence must be sympathy, and therefore weaker than if acting in the same part, that is, the skin itself; which, perhaps, is the reason why the venereal matter does not always affect those vessels and glands, while it always does the skin, if inserted into it.

The situation of buboes arising from the venereal disease in the penis, are in men, in the absorbent glands of the groin: if a gonorrhœa is the cause of a bubo, one groin is not exempted more than the other; both may be affected; but if a bubo arises in consequence of a chancre, then the groin may be generally determined by the seat of the chancre; for if the chancre is on one side of the penis, then the bubo will commonly be on that side; however, this is not universally the case, for I have known instances, although but few, where a chancre on one side of the prepuce, or penis, has been the cause of a bubo on the opposite side, which, if arising from that chancre, is a proof that the absorbents either anastomose, or decussate each other. If the chancre be on the frænum, or on the middle of the penis, between the two sides, then it is uncertain which side will be affected.

The situation of the glands of the groin is not always the same, and therefore the course of the absorbent vessels will vary accordingly. I have seen a venereal bubo, which arose from a chancre on the penis, a considerable way down the thigh; on the contrary, I have it seen it often as high as the lower part of the belly, before Poupart's ligament, and sometimes near the pubis, all of which three situations may lead

to some variations in the method of cure, therefore it may be proper to attend to them.

As the disease most commonly arises from copulation, the situations of buboes are generally in the groin; but as no part of the body, under certain circumstances, is exempt from this disease, we find the nearest external glands between the part of absorption, and the heart, every where in the body share the same fate with those of the groin, especially if external.

CHAPTER II.

OF BUBOES IN WOMEN.

The same diseases in the absorbents in consequence of the absorption of the venereal matter, take place in this sex as well as in men. I never saw but one case where the absorbent vessels were diseased; but this is nearly in the same proportion as those I have seen in men, when I consider the proportion the number of the one sex bears to that of the other who apply to me for a cure of the venereal disease in any form. The case was a gonorrhœa with violent itching and soreness, when the patient sat or walked, but she had very little pain in making water. When I examined the parts I could see no difference between them and sound parts, excepting that the left labium was more swelled, or fuller than the other, and a hard chord passed from the centre of that labium upwards to the os pubis, and passed on to the groin of the same side, and was lost in a gland as high as Poupart's ligament. It was not to be felt but by pressing the parts with some force, and it gave considerable pain upon pressure.

The swelling of the labium appeared to be somewhat similar to the swelling of the prepuce in similar cases in men, so that they would appear to arise from the same cause.

One would naturally suppose that what has been said of this complaint in the lymphatic glands in men, would be wholly applicable to women; and also that nothing peculiar to women could take place; but the seat of absorption is more extensive in this sex, and the course of some of the absorbents is also different, from whence there are three situations of buboes in women, two of which are totally different from those in men, and these I suspect to be in the absorbents.

The third situation of buboes in this sex is similar to that in men, and therefore they may be divided into three, as in men.

When buboes arise in women, where there is no chancre, it is more difficult to know whether they are venereal or not than in men; for, when they arise in men without any local complaint, it is known that no such complaint exists, and therefore the bubo cannot be venereal, excepting by immediate absorption; but in women it is often difficult to know whether there be any infection present or not; and therefore in order to ascertain the nature of the bubo, attention must be paid to its manner of coming on, progress, and other circumstances.

When chancres are situated forwards, near the meatus urinarius, nymphæ, clitoris, labia, or mons veneris, then we find that the matter absorbed is carried along one or both of the round ligaments, and the buboes are formed in those ligaments just before they enter the abdomen, without I believe ever going further. These buboes I suspect not to be glandular, but inflamed absorbents; and if so, it strengthens the idea that it is only an external part that can be affected in this way.

When the chancres are situated far back, near the perinæum, or in it, the matter absorbed is carried forwards along the angle between the labium and the thigh to the glands in the groin, and often in this course there are formed small buboes in the absorbents, similar to those on the penis in men; and when the effects of the poison do not rest here, it often produces a bubo in the groin, as in men.

CHAPTER III.

OF THE INFLAMMATION OF BUBOES, AND THE MARKS THAT DISTINGUISH THEM FROM OTHER SWELLINGS OF THE GLANDS.

The bubo commonly begins with a sense of pain which leads the patient to examine the part, where a small hard tumor is to be felt.* This increases like every other inflammation that has a tendency to suppuration; and if not prevented, goes on to suppuration and ulceration, the matter coming fast to the skin.

But we find cases where they are slow in their progress, which I suspect either arises from the inflammatory process being kept back by mercury, or other means; or being retarded by a scrofulous tendency, such a disposition in the parts not so readily admitting the true venereal action.

At first the inflammation is confined to the gland, which is moveable in the cellular membrane; but as it increases in size, or as the inflammation, and more especially the suppuration, advances, which in all cases produce rather a common effect than a specific, the specific distance is exceeded, the surrounding cellular membrane becomes more inflamed, and the tumor is more diffused. Some become erisypelatous, by which means they are rendered more diffused and œdematous, and do not readily suppurate, a circumstance often attending the erisypelatous inflammation.

* It must be remarked here, that whenever a person has either a gonorrhœa or a chancre, he becomes apprehensive of a bubo; and as there are in the gonorrhœa, and sometimes in the chancre, sympathetic sensations in or near the groin, they are suspected by the patient to be beginning buboes, and the hand is immediately applied to the part; and if he feels one of the glands, although not in the least increased, the suspicions are confirmed from a belief that he has no such parts naturally.

To ascertain what a disease is, is the first step in the cure; and when two or more causes produce similar effects, great attention is necessary to distinguish one effect from another, so as to come at the true cause of each.

The glands of the groin, from their situation, are liable to suspicion; for besides being subject to the common diseases, they become exposed to others by allowing whatever is absorbed to pass through them; and as the rout of the venereal poison to the constitution is principally through them, and being oftener ill from this cause than any other, they often are suspected of this disease without foundation.

To distinguish with certainty the true venereal bubo from swellings of those glands arising from other causes, may be very difficult. We must however examine all circumstances, to ascertain in what the bubo differs from the common diseases of those glands, whether in the groin or elsewhere; in which examination the apparent causes are not to be neglected. I have already given the character of the venereal bubo in general terms; but I shall now be more particular, as the two are to be contrasted.

The true venereal bubo, in consequence of a chancre, is most commonly confined to one gland. It keeps nearly its specific distance till suppuration has taken place, and then becomes more diffused.* It is rapid in its progress from inflammation to suppuration and ulceration. The suppuration is commonly large for the size of the gland, and but one abscess. The pain is very acute. The colour of the skin where the inflammation attacks is of a florid red.

It may be observed, that the buboes in consequence of the first mode of absorption, viz. where no local disease had been produced, will always be attended with a greater uncertainty of the nature of the disease than those attended or preceded by a disease in the penis; because a simple inflammation and suppuration of these glands is not sufficient to mark it to be venereal; but as we always have this disease in view when such parts as the glands of the groin are the seat of the

* It may be observed here, that the glands and surrounding parts being dissimilar, inflammation does not so readily become diffused as when it takes place in a common part.

disease, the patient runs but little risk of not being cured if it should be venereal; but I am afraid that patients have often undergone a mercurial course when there has been no occasion for it.

It will perhaps be difficult to find out the specific difference in the diseases themselves; but I think that such buboes as arise without any visible cause, are of two kinds, one similar to those arising from chancres or gonorrhœa; that is, inflaming and suppurating briskly. These I have always suspected to be venereal; for although there is no proof of their being so, yet from these circumstances it is a strong presumption that they are.

The second are generally preceded and attended with slight fever, or the common symptoms of a cold, and they are generally indolent and slow in their progress. If they should be more quick than ordinary, they become more diffused than the venereal, and may not be confined to one gland. When very slow, they give but little sensation; but when more quick the sensation is more acute, though not so sharp as in those that are venereal; and most commonly they do not suppurate, but often become stationary. When they do suppurate it is slowly, and often in more glands than one, the inflammation being more diffused, and commonly small in proportion to the swelling. The matter comes slowly to the skin, not attended with much pain, and the colour is different from that of the other, being more of the purple. Sometimes the suppurations are very considerable but not painful.

Now let us see what other causes there are for the swelling of these glands besides venereal infection, to which I have ascribed one of the modes of swelling; for there must be other causes to account for the other modes of it.

The first thing to be attended to is, whether or not there are any venereal complaints; and if not, this becomes a strong presumptive proof that they may not be venereal, but proceed from some unknown cause. If the swelling is only in one gland, very slow in its progress, and gives but little or no pain, it is probably merely scrofulous; but if the swelling is considerable, diffused, and attended with some inflammation and pain, then it is most probable that there is a constitutional action consist-

ing in slight fever, the symptoms of which are lassitude, loss of appetite, want of sleep, small quick pulse, and an appearance of approaching hectic. Such swellings are slow in their cure, and do not seem to be affected by mercury, even when very early applied.

A gentleman had all the symptoms of a slight fever; the pulse a little quick and hard, loss of appetite, and of course loss of flesh; a listlessness and a sallow look. While in this state a swelling took place in the glands of one of the groins. He immediately sent for me, because he imagined it to be venereal. From the history of the case I gave it as my firm opinion it was not; in this he had not much faith. The swellings were not very painful, and after having acquired a considerable size they became stationary. To please him I gave him a box of mercurial ointment to be rubbed on the leg and thigh only, of the side affected, that it might have a sufficient local effect, and as little go into the constitution as possible; but it did not appear to be of any service to the swellings in the groin, they remaining stationary, and almost without pain. His friends became uneasy, and sent their surgeons to him, who without knowing he was my patient, and of course without knowing my opinion, imagined that the disease was venereal, as they talked of giving mercury. With respect to the cure, I thought he should go to the sea and bathe.

Allowing the chance of the disease being venereal or not venereal, to be equal, I reasoned upon that ground. His present want of health could not be supposed to arise from any venereal cause, as it was prior to the swelling in the groin, and therefore though the swelling was venereal, he was not at present in a condition to take mercury, as a sufficient quantity of that medicine for the cure would kill him; and if it should not be venereal, that still a greater quantity of mercury must be given than what was necessary if it was venereal; because its not giving way readily would naturally make the surgeon push the mercury further; and besides this disagreeable circumstance, the disease in the groin might be rendered more difficult of cure. But if he went to the sea his constitution would be restored; and if the disease in the groin proved to be venereal, he would be in a proper condition to go

through a mercurial course, and by that means get rid of both diseases by the two methods. But if I should be right in my opinion, that there was nothing venereal in the case, then he would get well by the sea-bathing alone.

These arguments had the desired effect; he went directly to the sea, and began to recover almost immediately. About a fortnight after a small suppuration took place in one of the glands, I directed a poultice should be made with sea-water and applied, and if it broke that it should not be further opened, but poulticed till healed. In six weeks he came back perfectly recovered in every respect.

The above appearance, with the constitutional affections, I have seen take place when there were chancres, and I have been puzzled to determine whether it was sympathetic, from a derangement of the constitution, or from the absorption of matter.

I have long suspected a mixed case, and I am now certain that such exists. I have seen cases where the venereal matter, like a cold or fever, has only irritated the glands to disease, producing in them scrofula, to which they were predisposed.

In such cases the swellings commonly arise slowly, give but little pain, and seem to be rather hastened in their progress if mercury is given to destroy the venereal disposition. Some come to suppuration while under this resolving course: and others which probably had a venereal taint at first, become so indolent that mercury has no effect upon them, and in the end get well either of themselves or by other means, which I imagine may have induced some to think that buboes are never venereal. Such cases require great attention to be able to determine them properly; and I believe this requires in many cases so nice a judgment that we shall be often liable to mistakes.

Buboes are undoubtedly local complaints, as has been explained.

How far the lymphatic glands are to be considered as guards against the further pogress of this or any other disease caught by absorption, is not easily determined; we must however allow that they cannot prevent the poison from getting into the constitution in cases where it produces buboes; for whenever it affects these glands in its course it

duces the same disease in them which is capable of furnishing the constitution with an increased quantity of the same kind of poison.

The Editor has found that swellings in the glands of the groin, which readily suppurate, and are therefore mistaken for buboes, frequently occur in consequeuce of these parts, after being heated and covered with perspiration, being suddenly exposed to cold, to which they are very commonly liable in young men immediately after having connection with women.

CHAPTER IV.

GENERAL REFLECTIONS ON THE CURE OF BUBOES.

From what has been said upon the history of buboes, it will be needless here to enter into a discussion of the opinion of their being a deposit from the constitution, and of the conclusion drawn from this opinion, that they ought not to be dispersed: for according to this theory, to disperse them would be to throw the venereal matter upon the constitution. But if this were really the case, then there would be no occasion for the use of mercury, provided that the bubo be allowed to proceed, as it would prove its own cure; but even those, who were of this opinion, were not satisfied with the cure which they supposed nature had pointed out, but gave mercury, and in very large quantities. From the same history of a bubo I have also endeavoured to show that there are several buboes which are not in the least venereal, but scrofulous; and that there are also buboes which appear to be only in part venereal; or perhaps only a gland disposed to scrofula brought into action by the venereal irritation, similar to what happens often from the matter of the small-pox in inoculation. Therefore, prior to the method of cure, the true venereal bubo is to be distinguished from the others, if possible. When it is well ascertained to be venereal, resolution is certainly to be attempted if the bubo be in a state of inflammation only. The propriety of the attempt depends upon the progress the disease has made. If it be very large, and suppuration appears to be near at hand, it is probable that resolution cannot be effected; and if suppuration has taken place, I should very much doubt the probability of success, and an attempt might now possibly only retard the suppuration, and protract the cure.

The resolution of those inflammations depends principally upon

mercury, and almost absolutely upon the quantity that can be made to pass through them; and the cure of them, if allowed to come to suppuration, depends upon the same circumstances. The quantity of mercury that can be made to pass through a bubo, depends principally upon the quantity of external surface for absorption beyond the bubo.

Mercury is to be applied in the most advantageous manner, that is, to those surfaces by an absorption from which it may pass through the diseased gland; for, by destroying the disease there, the constitution has less chance of being contaminated. The powers of mercury may often be increased from the manner in which it is applied. In the cure of buboes it should always be made to pass into the constitution by the same way through which the habit received the poison; and therefore to effect this, it must be applied to the mouths of those lymphatics which pass through the diseased part, and which will always be placed on a surface beyond the disease.

But the situation of many buboes is such as not to have much surface beyond them, and thereby not to allow of a sufficient quantity of mercury being taken in this way; as for instance, those buboes on the body of the penis arising from chancres on the glands or prepuce.

These two surfaces are not sufficient to take in the necessary quantity to cure those buboes in its passage through them: therefore whenever the first symptoms of a bubo appear, its situation is well to be considered, with a view to determine if there be a sufficient surface to effect a cure, without having recourse to other means. It is first to be observed, whether the absorbent vessels on the body of the penis are affected, or the glands in the groin. If the disease be in the groin, it must be observed in which of the three situations of the bubo before taken notice of, it is; whether on the upper part of the thigh and groin, on the lower part of the belly before Poupart's ligament, or near to the pubes. If they are on the body of the penis, this shows that the absorbents leading directly from the surface of absorption are themselves diseased. If in the groin, and on the upper part of the thigh, or perhaps a little lower down than what is commonly called the groin, then we may suppose it is in the glands common to the penis and thigh. If

high up, or on the lower part of the belly, before Poupart's ligament, then it is to be supposed that those absorbents that arise from about the groin, lower part of the belly and pubes, pass through the bubo; and if far forwards, then it is most probable that only the absorbents of the penis and skin about the pubes pass that way. The knowledge of these situations is very necessary for the application of mercury for the cure by resolution, and for the cure after suppuration has taken place.

The propriety of this practice must appear at once, when we consider that the medicine cannot pass to the common circulation without going through the diseased parts; and it must promote the cure in its passage through them; while at the same time it prevents the matter which has already passed, and is still continuing to pass into the constitution from acting there, so that the bubo is cured and the constitution preserved.

But this practice alone is not always sufficient; there are many cases which mercury by itself cannot cure. Mercury can only cure the specific disposition of the inflammation; and we know that this disease is often attended with other kinds of inflammation besides the venereal.

Sometimes the common inflammation is carried to a great height, at other times the inflammation is erisypelatous, and I suspect often scrofulous. We must therefore have recourse to other methods.

Where the inflammation rises very high, bleeding, purging, and fomenting, are generally recommended. These will certainly lessen the active power of the vessels, and render the inflammation more languid, but they can never lessen the specific effects of this poison, which were the first cause, and are still in some degree the support of the inflammation. Their effects are only secondary; and if they reduce the inflammation within the bounds of the specific, it is all the service they can perform. If the inflammation be of the erisypelatous kind, perhaps bark is the best medicine that can be given; or if it be suspected to be scrofulous, hemlock, and poultices made with sea-water may be of service.

Vomits have been of service in resolving buboes, even after matter has been formed in them, and after they have been nearly ready to

burst; this acts upon the principle of one irritation destroying another; and the act of sickness and vomiting perhaps gives a disposition for absorption. A remarkable instance of this kind happened in an officer who had a bubo at Lisbon. It came to fair suppuration, and was almost ready to burst The skin was thin and inflamed, and a plain fluctuation felt. I intended opening it, but as he was going on board a ship for England on the day following, I thought it better to defer it till then. When he went on board, he set sail immediately, and the wind blew so very hard that nothing could be done for some days, all which time he was very sick, and vomited a good deal; when the sickness went off, he found the bubo was entirely gone, and it never afterwards appeared. When he came to England, he went through a regular course of mercury.

I. OF RESOLUTION OF THE INFLAMMATION OF THE ABSORBENTS ON THE PENIS.

The surface beyond the seat of the disease in this case, that is, all that part of the penis before the bubo, is not large enough to take in a quantity of mercury sufficient to prevent the effects of absorption, and therefore recourse is to be had to other means; yet this application should by no means be neglected, and this surface, small as it is, should be constantly covered with mercurial ointment, which will assist in the cure of the local disease. It may be disputed whether any medicine can pass through diseased lymphatics, so as to have any effect upon them; but experience shews that it certainly can. As this surface is too small, and as it is necessary that a larger quantity should be taken in, it becomes proper to give it either by the mouth, or by friction on some larger surface; this is necessary to prevent the lues venerea, as well as to cure the parts themselves. The quantity cannot be determined, that must be left to the surgeon, who must be directed by the appearances of the original complaint, and the readiness with which they give way.

The same method is to be followed in women; but as there is a

larger surface in this sex, more mercury may possibly be absorbed; and there should be a constant application of ointment to the inside, and outside of the labia.

II. OF THE RESOLUTION OF BUBOES IN THE GROIN.

The inflammation of the glands is to be treated exactly upon the same principle with the other; but we have in general a larger surface of absorption, so that we can make a greater quantity of mercury pass through the diseased parts.

It will be proper to apply the mercury according to the situation of the inflamed gland. If the bubo be in the groin, according to our first situation, then it is necessary to rub the mercurial ointment upon the thigh. This surface will in general absorb as much mercury as will be sufficient to resolve the bubo, and to preserve the constitution from being contaminated by the poison that may get into it; but if resolution does not readily take place, then the surface of friction may be increased, by rubbing the ointment upon the leg.

But if the bubo be on the lower part of the belly, that is, in the second situation, then the ointment should be rubbed also upon the penis, scrotum, and belly; and the same, if the bubo should be still further forwards; for probably those glands receive the lymphatics from all the surfaces mentioned, as well as from the thigh and leg.

The length of time the frictions should be continued, must be according to circumstances. If the bubo gives way, they must be continued till it has entirely subsided, and perhaps longer, on account of the cause of it, a chancre, which may not yield so soon as the bubo. If it still goes on to suppuration, the frictions may, or may not be continued; for I do not know for certain if any thing is to be gained by their continuance in this state.

The quantity here recommended may affect the mouth, and it must also be regulated accordingly.

III. OF THE RESOLUTION OF BUBOES IN WOMEN.

When speaking of the seat of buboes in women I observed that of the different situations when arising from the parts of generation in this sex, two were peculiar to them, the others similar to those in men.

In the treatment of buboes in women some attention should be paid to their situation, for on that depends in some degree the method of resolution and cure when they suppurate. The first is in the round ligament, the second between the labium and thigh, and the third in the groin.

In the first and second situations the surface of absorption beyond the bubo is by much too small to be depended upon for throwing in a sufficient quantity of mercury to produce resolution, especially in the first situation; but in the second, that is, between the labia and thigh, the mercury may be rubbed in all about the anus and buttock, as all the absorbents of those parts probably pass that way; we know at least that they do not pass into the pelvis by the anus, but go by the groin. Other means of introducing mercury must be recurred to, as is recommended in men; but still it will be proper to rub in on these surfaces as much as possible.

In the situations common to both sexes we have a larger field, yet as they are divisible into three, the same observations hold good, and a similar mode of practice is to be followed in women as in men.

IV. OF BUBOES IN OTHER PARTS.

As venereal buboes arise from other modes of application of the poison besides coition, they are to be found in different parts of the body; but the hands appear to be the next in order of frequency. They arise in the armpit from wounds in the hands or fingers being contaminated by venereal matter, and reduced to a chancre. In such cases it becomes necessary that the ointment should be rubbed on the arm and fore-arm;

but this surface may not be sufficient, therefore we must apply it in another way, or to other parts, to produce its effects upon the constitution.

I have seen a true venereal chancre on the middle of the lower lip produce a bubo on each side of the neck under the lower jaw, just upon the maxillary gland. By applying strong mercurial ointment to the under lip, chin, and swellings, they were resolved.

V. OF THE QUANTITY OF MERCURY NECESSARY FOR THE RESOLUTION OF A BUBO.

The quantity of mercury necessary for the resolution of a bubo must be proportioned to the obstinacy of the bubo, stopping short of certain effects upon the constitution. If it be in the first situation, and yields readily upon rubbing in half a dram of mercurial ointment made of equal parts of quick-silver and hogs lard every night, and the mouth does not become sore, or at most only tender, then pursuing this course till the gland is reduced to its natural size will be sufficient, and probably will be a good security for the constitution, provided the chancre, which may have been the cause of the bubo, heals at the same time. If the mouth is not affected in six or eight days, and the gland does not readily resolve, then two scruples, or a dram, may be rubbed in every night; and if there be no amendment, then more must be rubbed in; in short, if the reduction is obstinate, the mercury must be pushed as far as can be done without producing a salivation.

If there be a bubo on each side, then there cannot be so much mercury applied locally to each; for the constitution most probably could not bear double the quantity which is necessary for the resolution of one. But in such cases we must not so much mind the soreness of the mouth as when there is but one; however the buboes must be allowed to go on to suppuration, rather than affect the constitution too much by the quantity of mercury: and therefore when there are two, they are more likely to suppurate than where there is only one.

In the second and third situation of buboes, if we find that most pro-

bably a sufficient quantity of mercury does not pass through them for their resolution, it may be continued to be thrown in by the leg and thigh to act upon the constitution, as has been already observed. The quantity taken in in this way must be greater than what would be necessary if the whole could be made to pass through the bubo. The mouth must be affected, and that in proportion to the state and progress of the bubo.

This method of resolving buboes occurred to me at Bellisle, in the year 1761, where I had good opportunities of trying it upon the soldiers; and I can say with truth, that only three buboes have suppurated under my care since that time, and two of these were in one person, where a small quantity of mercury had considerable effects on the constitution, and therefore a sufficient quantity could not be sent through the two groins for their resolution; but in both cases the suppurations were small in comparison to what they threatened to be, which I imputed to the mode of treatment.

Many buboes after every attempt remain swelled without either coming to resolution or suppuration, but rather become harder and scirrhous. Such I apprehend were either scrofulous at first, or became so when the venereal disposition was removed. The cure of them should be attempted by hemlock, sea-water poultices, and sea-bathing, as will be further taken notice of.

VI. OF THE TREATMENT OF BUBOES WHEN THEY SUPPURATE.

After every known method has been used, buboes cannot in all cases be resolved, but come to suppuration. They then become more an object of surgery, and are to be treated in some respects like any other abscess. If it be thought proper to open a bubo, it should be allowed to go on thinning the parts as much as possible. The great advantage arising from this is, that these parts having become very thin, lose the disposition to heal, which gives the bottom of the abscess a better chance of healing along with the superficial parts; by these means too,

a large opening is avoided, and the different modes made use of for keeping the skin from healing till the bottom is healed, become unnecessary.

It may admit of dispute, whether the application of mercury should be continued or not through the whole suppuration. I should be inclined to continue it, but in a smaller quantity; for although the parts cannot set about a cure till opened, yet I do imagine that they may be better disposed to it; and I think that I have seen cases where suppuration took place, although under the above practice, that were very large in their inflammation, but very small in their suppuration, which I imputed to their having taken mercury in the beforementioned way, both before and while suppuration was going on.

It has been disputed more in this kind of abscess than in others, whether it should be opened, or allowed to burst of itself; and likewise, whether the opening should be made by incision, or caustic.

There appears to be nothing in a venereal abscess different from any other, to recommend one practice more than another. The surgeon should in some degree be guided by the patient.

Some patients are afraid of caustics; others have a horror of cutting instruments; but when it is left wholly to the surgeon, and the bubo but small, I suppose a slit with a lancet will be sufficient; in this way no skin is lost.

But when a bubo is very large, in which case there is a large quantity of loose skin, perhaps the caustic will answer better, both on account of its destroying some skin, and because the destruction is attended with less inflammation than what attends incision. If done by a caustic, the lapis septicus is the best;* but it is not necessary to open every bubo, and perhaps it may be difficult to point out those where opening would be of service, or necessary.

* I once opened two buboes in the same person, one immediately after the other. The first was with the lapis infernalis, which gave him considerable pain, and therefore he would have the other opened with a lancet, as the pain would only be momentary. But it was so great, and the soreness continued so long, while there was no pain in the other deadened by the caustic, after it had done its business; that next day he said, if he was ever obliged to to have one opened again it should be with caustic.

The bubo is to be dressed afterwards according to the nature of the disease, which, I have already observed, is often so complicated as to baffle all our skill. The constitution at the same time is to be attacked with mercury, either by applying it internally or externally; if the mercury is applied externally, it should be applied to that side, and beyond where the bubo is, as before directed in treating of the resolution of buboes, as it may have some influence on the disease in its passing through the part.

Giving mercury in these cases answers two purposes; it assists the external applications to cure the buboes, and it prevents the effects of the constant absorption of the venereal matter from the sore.

How far it is necessary to pursue the mercurial course with a view to prevention, it is not possible to determine; but it may be supposed, that it is necessary to give the same quantity to prevent a disease, that would cure one that has already taken place. It will be necessary to continue the course till the bubo is healed, or till it has for some time lost its venereal appearance; but it may be difficult to ascertain this last fact; therefore we must have recourse to experience, not theory, and continue the course in general till the whole is healed, and even longer, especially if the bubo heals very readily; for we find in many cases, that the constitution shall be still tainted after all. However, some restrictions are to be made here, for I have already observed, that it often happens that buboes assume other dispositions besides the venereal, which mercury cannot cure, but will even make worse. It is therefore very necessary to ascertain the distinction, which will be taken notice of.

The treatment of buboes in women, when they suppurate, is the same with those of men.

CHAPTER V.

OF SOME OF THE CONSEQUENCES OF BUBOES.

I FORMERLY observed, that the venereal disease was capable of bringing latent dispositions or susceptibilities into action. This is remarkably the case with buboes, and I believe the disposition is more of the scrofulous kind than any other: whether this arises from the buboes being formed in lymphatic glands, or not, is probably not easily determined.

It sometimes happens that these sores when losing, or entirely deprived of the venereal disposition, form into a sore of another kind, and most probably of various kinds. How far it is a disease arising from a venereal taint, and the effects of a mercurial course jointly, is not certain, but most probably these two have some share in forming the disease. If this idea of it were just, it would become a specific disease, and be reducible to one method of cure; but I should suspect that either the constitution, or the part, hath some, if not the principal share in it; that is, the parts fall into a peculiar disease, independent of the constitutional disease or method of cure; for if it arose out of the two first entirely, we might expect to meet with it oftener. So far as the constitution, or the part, has a share in forming this disease, it becomes more uncertain what the disease is, because it must, in some degree, partake of the constitution or nature of the part. I am apt to suspect something scrofulous in them, especially as they are diseases of the lymphatic glands.

Such diseases make the cure of the venereal much more uncertain, because when the sore becomes stationary, or the mercury begins to disagree, we are ready to suspect that the virus is gone; but this is not always the case; the virus is, perhaps, only less powerful than the new-formed disease, and as it were lies dormant, or ceases to act, and when the other becomes weaker, the venereal begins to show itself again.

The treatment in such cases is to attack the predominant disease; but still the difficulty is to find out the disease, and when it is or is not venereal. The following case explains this difficulty very well.

A gentleman had a very large venereal bubo: it was opened: he took a great deal of mercury for about two months, but I suspect not in sufficient doses, which produced a mercurial habit; the bubo had no disposition to heal, and he came to me. From the account he gave me, I suspected that he had then too much of a mercurial habit to receive, at this time, any further good from that medicine, I therefore advised him to use a good nourishing diet for near a month; after that I put him upon a brisk mercurial course by friction, and the parts put on a better appearance. This course he continued for near two months, and then the sore, although much mended, began to be stationary. I did now conceive that the venereal action was destroyed, and therefore immediately left off the mercurial course and put him upon a milk diet, and sent him into the country. But not gaining much ground, he had a strong decoction of the sarsaparilla with mezereon given him, which, although continued for above a month, produced little or no effect. I also gave him the cicuta as much as he could bear, with the bark, almost the whole time, without effect; new sinuses formed, which were opened, and the sores became extremely irritable, with thickened lips. The dressings were poultices made with the juice of hemlock, sea water, opium, and a gentle solution of lunar caustic; but nothing seemed to affect it. I suspected something scrofulous, therefore proposed he should go and bathe in the sea; but this then could not be done. These different treatments, after mercury had been left off, took up about four months, without the least benefit. Being doubtful whether there might not be still something venereal in the sore, especially as appearances were growing worse, and it was now four months since he had taken mercury, I was inclined to try it once more, and sent him two portions of ointment, half an ounce each, to rub in in two nights. He had caught a little cold, and therefore did not rub in the mercury the two evenings as ordered; and called upon me the third day, and told me he was much better; the sore now became easy, the watery or transparent inflam-

mation began to subside, the lips became flatter and thinner, and the edges of the sore began to heal. I then desired him not to rub in the ointment, but wait a little. In eight or ten days the sore had contracted to three quarters of its former size, and had all the appearance of a healing sore.

Quere: What conclusions should we draw from this case? I think the following; that the virus may be gone although the sore has no disposition to heal, therefore we are not to look upon the not healing of a bubo as a sign of the presence of the original disease. Secondly; that the sarsaparilla, mezereon, cicuta, and the bark, will not do in all such cases; and thirdly, that some of these diseases are capable of wearing out the unhealthy disposition of themselves, and that we should not be too ready to attribute cures to our treatment; for if the mercury had been rubbed in, and the same effects had still taken place, I should then have certainly pursued the mercury with vigor, and attributed the cure to it; but I should not have rested here, I should have related the case as an instance of the disease continuing after repeated courses of mercury, and that it was necessary in such cases where the mercury appeared to lose its power, and even do harm, to wait, and season the constitution to strength and the loss of the mercurial habit; and that even four months was sometimes necessary for this purpose; after which we must begin again to give mercury.

A gentleman had a common gonorrhœa which was severe; I gave him an injection of a grain of corrosive sublimate in eight ounces of water, with a few mercurial pills. After having continued the injection for ten, or twelve days without any visible benefit, I gave it as my opinion that it would be of no service to continue it any longer, and therefore desired he would be quiet for a little time. About this time a swelling in each groin took place, and supposing them to be venereal, I ordered mercurial ointment to be rubbed into both the legs and thighs to resolve them if possible. He appeared to be less uneasy about the buboes than he was about the gonorrhœa; but I told him that the cure of that complaint would be sensibly involved in the resolution of the buboes. I spoke too confidently of my powers of the resolution of the buboes,

for they both suppurated; although the suppuration was small in comparison to the magnitude of the buboes when they first inflamed. The frictions were left off.

While we were attempting to resolve the buboes he got well of the gonorrhœa. The skin covering the buboes became thin, they were both opened, one with a caustic, the other with a lancet; when opened, he was ordered to rub in mercury again on the thighs and legs for their cure. They began soon to look well, and to close fast, but when about half healed they became stationary. I suspected that a new disease was forming. On continuing the frictions a little longer they began to inflame and swell anew, and a suppuration took place about half an inch above each of the first suppurations, which broke into the first. I left off the mercury immediately upon their inflaming, and said that now a new disease had formed. I ordered poultices made with sea-water to be applied, and also a decoction of sarsaparilla to be taken, but this appeared not to be sufficient for the cure of this new disease. I then ordered him to the sea, and to go into the tepid sea bath every evening, the heat of the water to be about ninety degrees. By the time he had been in the bath four times, the inflammation and swelling had very much abated, and the first sores, or original buboes, were beginning to heal. He went on with the bathing every evening for about three weeks, when the sores rather began to look worse; I then suspected that the venereal disposition was become predominant, and I ordered him to rub in as before, which he did, and in about a fortnight the first buboes healed, but the second suppurations were not yet healed; then I supposed it to be entirely the new formed disease, and he went into the country, where I desired he might go into the open sea every day, as he then could have an opportunity, which he did, and got perfectly well, and has continued so.

This case plainly shows that there was another disposition formed besides the venereal, and which was put into action by the venereal irritation, which I suspect was of a scrofulous kind, and probably not truly such.

I have seen some buboes most exceedingly painful and tender to

almost every thing that touched them, and the more mild the dressings that were applied, the more painful the parts became.

In some the skin seems only to take on the disease. Ulceration going on in the surrounding skin, while a new skin forms in the centre and keeps pace with the ulceration, forming an irregular sore like a worm-eaten groove all round. This, like the erisypelatous inflammation, as also some others, appears to have only the power of contaminating the parts that have not yet come into action; and those that have already taken it seem to lose the diseased disposition, and heal readily.

In some they spread to an amazing extent, as the following case shows, the circumstances of which are very remarkable.

A young gentleman, aged eighteen years, in consequence of a venereal infection had two buboes, which were both opened. They were treated in the usual manner, and at first put on a favourable appearance; but when they were nearly healed, they began to ulcerate at their edges and spread in all directions, rising above the pubes almost to the navel, and descending upon each thigh. His nights became restless, and his general health was affected. A great variety of medicines were tried, particularly mercury in different forms, with little or no effect. Extract of hemlock did more good than any thing else, and was taken in unusual quantities. An ounce was swallowed in the course of the day for some time, which was afterwards encreased to an ounce and an half, two ounces, and even two ounces and an half. It produced indistinct vision and blindness, loss of the voice, falling of the lower jaw, a temporary palsy of the extremities, and once or twice a loss of sensation; and notwithstanding he was almost every night in a state, as it were, of complete intoxication from the hemlock, his general health did not suffer, but, on the contrary, kept pace in its improvement with the ulcers. They could not, however, be healed by the hemlock; and among many other things Æthiops mineral and Plummer's pill were liberally given, seemingly with advantage. Recourse was had to the hemlock from time to time. A great many different kinds of dressings were made trial of, none of which were found to exceed dry lint. The ulcers were nearly all healed, after having tormented him upwards of three years, when committing

some irregularities in diet, and the sores getting worse, he returned to the extract of hemlock, which he had for some time laid aside, and of himself swallowed, in the course of the morning, ten drams. This quantity was only the half of what he had formerly taken in twenty-four hours, but his constitution had been at that time gradually habituated to the medicine. The ten drams produced great restlessness and anxiety; he dropt insensible from his chair, fell into convulsions, and expired in two hours.

To return to the cure of buboes; where they only become stationary and appear to have but little disposition to spread, which is most common; when perhaps a sinus or two may be found running into them from some other gland; I have often seen them give way to hemlock, and sooner than to any thing I am acquainted with, especially if joined to the bark. If the hemlock is applied both internally and externally, it answers better.

Sarsaparilla is often of singular service here, as well as in other cases arising seemingly from the same cause; and I have seen sea-bathing of great service, as also sea-water poultice.

At the Lock Hospital they use goldrefiners' water as an application, which is of some service in some cases. Dr. Fordyce recommends the juice of oranges to be drank in large quantities, which I have seen good effects from in some cases. The mezereon is in some instances of singular use.

PART VI.

CHAPTER I.

OF THE LUES VENEREA.

The lues venerea, I have already observed, arises in consequence of the poisonous matter being absorbed and carried into the common circulation This form of the disease, which I have called the constitutional, * would appear to be much more complicated, both in the different ways in which it may be caught, and in its effects when caught, than either a gonorrhœa or chancre. It generally arises from the local complaints before taken notice of, by the matter being absorbed from them and carried into the constitution. The matter however appears to be capable of being taken into the constitution by simple application, without first having produced either of the before mentioned local effects, as was taken notice of in treating of the formation of the bubo; but this seems to be only when applied to some particular parts of our body, such as may be called a half internal surface, as the glans penis. I think it is probable that it is not capable of being taken in by the absorbents of the sound skin, at least I know of no instance of it; however this is only opinion.

* The term constitutional is perhaps not strictly a proper term; for by constitutional disease strictly, I would understand that in which every part of the body is acting in one way, as in fevers of all kinds, either sympathetic or original; but the venereal poison appears to be only diffused through the circulating fluids, and as it were, to force certain parts of the body to assume the venereal action, which action is perfectly local, and takes place in different parts in regular succession of susceptibilities; there are but few parts therefore acting at the same time; and a person may be constitutionally affected in this way, and yet almost every function going on well.

It is likewise capable of being taken into the constitution by being applied to common ulcers, although not necessarily rendering these ulcers themselves venereal; also by wounds, as has been observed; but I believe always previously producing ulceration in the wound.

Many other modes of infection have been supposed, but I believe erroneously; such suppositions most probably having taken their rise from ignorance or deceit, two great sources of error in this disease.

It is most likely that contamination takes place about the beginning of the local complaints, especially when from a chancre: for there is in most cases less chance of its happening afterwards, because the patient commonly flies to medicine, which generally becomes a prevention of contamination. For if it could take place through the whole time of the cure, we should have the parts contaminated at different periods, coming into actionat d fferent times, each according to its stated time, although in similar parts both in their nature and other circumstances; but as these similar parts do not vary much in their times of coming into action, it is reasonable to suppose they were contaminated at or near the same time, and therefore that no contamination was taking place in the time of the cure, although we may suppose absorption to be going on equally then as at any other time.

In cases of contamination from a gonorrhœa where no mercury has been taken, we might expect this irregularity in similar structures; but as contamination so seldom takes place in this way, we have not a chance of great variety from such; however it would be worth while to ascertain the matter, which from a great many cases might be done.

Without being very exact in ascertaining the different proportions in those who have the lues venerea that originates from the three several modes above described, I think one may venture to say from general practice or experience, that where one contracts it from the first cause, that is, where no local effects have been produced, an hundred have it from the second, or gonorrhœa; and where one has it from the second, an hundred have it from the third, or chancre; and perhaps not one in five hundred who have connection with venereal women, have it in the first way, and not one in an hundred have it from the second; while

not one in an hundred would escape having it from the third, if the means of prevention were not made use of in the common method of cure of chancre.

I. OF THE NATURE OF THE SORES OR ULCERS PROCEEDING FROM THE LUES VENEREA.

In consequence of the blood being contaminated with real venereal pus, it might naturally be supposed that the local effects arising therefrom would be the same with the original which produced them; but from observation and experiment I have reason to believe that they are not.

In considering this subject we may first observe, that local effects from the constitution are all of one species, that is ulcers, let the surface upon which they appear be what it will, whether the throat or common skin, which is not the case in the local application of the matter in gonorrhœa and chancre; for there I observed that it produced effects according to the nature of the surfaces. Now if the matter when in the constitution were to act upon the same specific principles with that which is applied, we should have gonorrhœas when it attacked a canal; sores or chancres when it attacked other surfaces; but it has never been yet known to produce a gonorrhœa from the constitution, though this has indeed been suspected. For some gonorrhœas in which it has not been clear how they were contracted, and which did not easily give way to the common methods of cure, have been supposed to have arisen from the constitution. Whenever the disease affects the mouth and nose, it has always been looked upon as producing a true chancre; yet even here I find that such ulcers in their first appearance are very different from chancres. The true chancre, I observed, produces considerable inflammation, which of course brings on quickly suppuration, attended often with a great deal of pain; but the local effects from the constitution are slow in their progress, attended with little inflammation, and are seldom or ever painful, except in particular parts. However, this sluggishness in the effects of the poison is more or less according to

the nature of the parts which become diseased; for when the tonsils, uvula, or nose are affected, its progress is rapid, and the sores have more of the chancre in their appearance than when it affects the skin; yet I do not think that the inflammation is so great in them as in chancres that are ulcerating equally fast.

It has been supposed that even all the secretions from the contaminated blood could be affected so as to produce a like poison in them; and as the parts of generation are thrown in the way of receiving it, when fresh contracted, so they still lie under the censure of having it returned upon them from the constitution. Hence it has been supposed that the testicles and vesiculæ seminales may be affected with the disease; the semen may become venereal, may communicate the disease to others, and after impregnation may even grow into a pocky child: but all this is without foundation; otherwise, when a person has the lues venerea, no secreting surface could be free from the state of a gonorrhœa, nor could any sore be other than venereal. Contrary to all which the secretions are the same as before; and if a sore is produced by any other means in a sound part, that sore is not venereal, nor the matter poisonous, although formed from the same blood.

The saliva in the case of a mad dog being a natural secretion rendered poisonous, may be brought as an argument in contradiction to this theory; yet it is easily accounted for, and might be produced rather as an argument in support of it. In the dog there is an irritation peculiar to the hydrophobia in the salivary glands; but the other and natural secretions of the same dog, are not capable of giving this infection, because they are not susceptible of the hydrophobiacal irritation, and therefore have it not.

The breath and sweat are supposed to carry along with them contagion. The milk of the breast is supposed to be capable of containing venereal poison, and of affecting the child who sucks it; but there are several reasons which overturn these opinions. First, we find that no secretion is affected by this poison, excepting where the secreting organs have been previously affected with venereal inflammation or irritation, or its specific mode of action. Again, if they were contaminated so as

to produce matter similar to that of an ulcer in the throat, such matter would not be poisonous, nor possess a power of communicating the disease, as will be explained more fully hereafter. Further, true venereal matter, even when taken into the stomach, does not affect either the stomach or constitution, but is digested; as was evident in the two following cases:

A gentleman who had chancres which discharged largely, used to wash the parts with milk in a tea-cup with some lint, and generally let the lint lie in the cup in the milk. A little boy in the house stole the milk and drank it, but whether or not he swallowed the lint was not known. No notice was taken of this by the gentleman either to the family or the boy; and attention, unknown to the family, was paid to the boy even for years, but nothing happened that could give the least suspicion of its having affected him either locally in the stomach or constitutionally.

A gentleman had a most violent gonorrhœa, in which both the inflammation and the discharge were remarkably great. He had also a chordee which was very troublesome at night when in bed. In order to cool the parts and keep them clean he had a small bason of milk by the bed side, in which, when the chordee was troublesome, he got up and dipped or washed the penis. This operation he frequently repeatedin the night. Under such complaints he allowed a young lady to sleep with him. Her custom was to have by the bed side a bason of tea to drink in the morning before she got up; but she drank one morning the milk instead of the tea. This was not known till she got up, which was five or six hours after. I was sent for directly, and in the mean time she endeavoured to vomit, but could not. When I came I ordered ipecacuanha, which was to be sent for, and which is slow in its operation. She vomited, but it was more than eight hours after drinking the milk and water, and what came up was nothing but slime, mucus, or water, the milk being digested. I was attentive to what might follow, but nothing uncommon happened, at least for many months.

It is also supposed, that a fœtus in the womb of a pocky mother may

be infected and have the disease from her, as it were naturally interwoven with it. This I should doubt very much, both from what may be observed of the secretions, and from finding that even the matter from such constitutional inflammation is not capable of communicating the disease as before mentioned. However, one can conceive the bare possibility of a child being affected in the womb of a pocky mother, not indeed from the disease of the mother, but from a part of the same matter which contaminated the mother and was absorbed by her; and whether irritating her solids to action or not may possibly be conveyed to the child, pure as absorbed; and if so, it may affect the child exactly in the same way it did or might have done the mother. This idea has been carried still further; for it has been supposed that such a contaminated child could contaminate the breasts of a clean woman by sucking her, the possibility of which will be considered presently. We may observe, that even the blood of a pocky person has no power of contaminating, and is not capable of giving the disease to another even by inoculation; for if it were capable of irritating a sound sore to a venereal inflammation, no person that had this matter circulating, or had the lues venerea, could escape having a venereal sore whenever he is bled or receives a scratch with a pin, the part so wounded turning into a chancre. For if venereal matter had been on the point of the lancet, or on the point of the pin, the punctures would have become chancres.

II. OF THE MATTER FROM SORES IN THE LUES VENEREA COMPARED WITH THAT FROM CHANCRES AND BUBOES.

When the matter has got into the constitution, it from thence produces many local effects on different parts of the body, which are in general a kind of inflammation, or at least an increased action occasioning a suppuration of its own kind; it is supposed that the matter produced in consequence of these inflammations, similar to the matter from a gonorrhœa or chancre, is also venereal and poisonous. This I believe till now has never been denied; and upon the first view of the subject

one would be inclined to suppose that it really should be venereal; for, first, the venereal matter is the cause; and again, the same treatment cures both diseases; thus mercury cures both a chancre and a lues venerea; however this is no decisive proof, as mercury cures many diseases besides the venereal. On the other hand there are many strong reasons for believing that the matter is not venereal. There is one curious fact which shows it is either not venereal, or if it be, that it is not capable of acting in some respects on the same body or same state of constitution as that matter does which is produced from a chancre or gonorrhœa. The pus from these latter when absorbed generally produces a bubo, as has been described; but we never find a bubo from the absorption of matter from a pocky sore; for instance, when there is a venereal ulcer in the throat, we have no buboes in the glands of the neck; when there are venereal sores on the arms, or even suppurating nodes on the ulna, there are no swellings of the glands of the armpit; although such will take place if fresh venereal matter is applied to a common sore on the arm, hand, or fingers. No swelling takes place in the glands of the groin from either nodes or blotches on the legs and thighs. It may be supposed that there is no absorption going on from such sores; but I think we have no grounds for such supposition. Its mode of irritation, or the action of the parts affected, is very different from what happens in the chancre, gonorrhœa or bubo, being hardly attended with inflammation, which in them is generally violent.

It might be supposed that a constitution truly and universally pocky, is not to be affected locally by the same species of matter; but from the following experiments it would appear that matter from a gonorrhœa or chancre is capable of affecting a man locally that is already poxed; and that matter from pocky sores, arising from the constitution, has not that power.

A man had been affected with the venereal disease a long time, and had been several times salivated, but the disease still broke out anew. He was taken into St. George's Hospital, affected with a number of pocky sores; and before I put him under a mercurial course I made the following experiment: I took some matter from one of the sores

upon the point of a lancet, and made three small wounds upon the back, where the skin was smooth and sound, deep enough to draw, blood. I made a wound similar to the other three, with a clean lancet, the four wounds making a quadrangle; but all the wounds healed up, and none of them ever appeared after.

This experiment I have repeated more than once, and with the same result; it shows that a pocky person cannot be affected locally with the matter proceeding from the sore produced by the lues venerea. But to see how far real venereal matter was capable of producing chancres on a pocky person, I made the following experiment.

A man who had venereal blotches on many parts of his skin, was inoculated in sound parts with matter from a chancre, and also with matter from his own sores. The wounds impregnated with the matter from the chancres became chancres, but the others healed up. Here then was a venereal constitution capable of being affected locally with fresh venereal matter. This experiment I have likewise repeated more than once, and always with the same effect.

I ordered a person at St. George's Hospital to be inoculated with the matter taken from a well marked venereal ulcer on the tonsil, and also with matter from a gonorrhœa, which produced the same effects as in the preceding experiment; that is, the matter from the gonorrhœa produced a chancre, but that from the tonsil had no effect.

A woman, aged twenty-five, came into St. George's Hospital, August 21, 1782, with sores on her legs, and blotches over her body. Her husband was a soldier. He gave her the venereal disease, December 1781. Her symptoms then were a discharge from the vagina, and a small swelling of the glands of the groin, which were painful. She had taken some pills, supposed to be mercurial, to the number of thirty. February 1782, about three months after being infected, the discharge stopped, but the swelling, which had been gradually increasing ever since its first appearance, had now suppurated. She applied some ointment to it which was brought her by her husband, and in two months it got well, that is, in April 1782. After the bubo got well, a discharge from the vagina came on, for which she took more of the same pills she had

taken before, to the number of thirty. After this time blotches came out over her whole body; some of which about her legs, under her arms, and upon her nipples, ulcerated.

Twins, which she bore at eight months, in March 1782, at the time the bubo was healing, had blotches upon them at their birth, and died soon after.

Another girl, about two years old, whom she suckled, was also covered with blotches when she came to the hospital.

To ascertain whether her secondary ulcers were infectious, that is, whether the matter of them would have the specific effects of venereal matter, she was inoculated with some matter from one of her own ulcers, and with some matter from a bubo of another person where mercury had not been used. This was done September 18, 1782. September 19, the puncture where she was inoculated with her own matter gave her pain three hours from the time of inoculation, and the day following it inflamed a little. The other had not then inflamed at all.

September 20, both the punctures had suppurated, and had the appearance of a smallpox pustule; they spread considerably, and were attended with a good deal of inflammation. That from her own matter healed with common poultices, and ointments without mercury; but the other, although treated in a similar way, continued in the same state, attended with much pain and inflammation.

September 22, the child was inoculated with some matter from one of its own ulcers, and with some common pus. The punctures both inflamed in a small degree, but neither of them suppurated.

The mother and the child went into the salivation ward, October 21, 1782; the child took no mercury. It was supposed that its gums became a little sore, and the blotches got well.

During the time that the mother was using mercury, the ulcer from inoculation began to get well, and all her venereal symptoms disappeared. What shall we say to this case? Were the blotches venereal? There was every leading circumstance to make us think so, which was strengthened by the method of cure. If they were venereal, it strengthens my opinion that the constitutional appearances of the disease do not

produce matter of the same species that produced them. If it was not venereal, then it shows we have no absolute rule by which to judge in such cases.

It has been supposed and asserted from observation, that ulcers in the mouths of children from a constitutional disease, which constitutional disease was supposed to be derived from the parent, produced the same disease upon the nipples of women who had been sucked by them, giving it, as it were, at the third hand; that is, the children were contaminated either by their mothers or fathers having the disease in form of a lues venerea (of which I have endeavoured to show the impossibility); the child was the second, and the nurse was the third. If, however, it were possible to contaminate once in this way, it would be possible to contaminate for ever.

How far the observations upon which the beforementioned opinion is founded, have been made with sufficient accuracy to overturn those which I made with a view to ascertain the truth, I know not; but from a more accurate investigation of some of those cases which were by most of the faculty called venereal, they appeared evidently not to be such: to say what they were, would lead us into the consideration of other diseases. The following case may lessen our faith in the histories of such as have been supposed to be venereal.

Before I describe the case, I shall first mention some of the circumstances leading to it.

A child was supposed to infect its nurse with the venereal disease. The parents had been married above 12 years when this child was born. The father was a very fond husband, and the mother one of the mildest and most affectionate women that could possibly exist. The father had a venereal gonorrhœa two years before he married, that is, fourteen years before the birth of the child. About nine months after marriage they had a child, and afterwards a second, both of which were extremely healthy at birth, and still continue so. The mother fell into a weakly state of health, and miscarried of her third child at the end of five months. The fourth child came at seven months, but was puny, weak, and had hardly any cuticle when born. It was immediately after birth

attacked with a violent disorder in the bowels so as to purge blood. It died in a few days and was opened by me. The whole skin was almost one excoriated surface. The intestines were violently inflamed and thickened.

With her fifth child, from great care, she went eight months, and it was now hoped that she might go the full time, and also that this child might be more healthy than the former. When she was delivered, the child was very thin, but free from any visible complaint.

Some days after birth it became blistered in a vast number of places on its body, which blisters were filled with a kind of matter, and when they broke they discharged a thinnish pus. The inside of the mouth was in the same condition. Bark was given to the nurse. Bark in milk was given to the child by the mouth, and it was fomented with decoction of bark; but in about three weeks after birth it died.

Some weeks after the death of the child, the nurse's nipple, and the ring round the nipple, inflamed, and sores or ulcers were formed with a circumscribed base.* They were poulticed, but without benefit. She also complained of a sore throat, but the sensation she complained of was so low in the throat that nothing diseased could be seen. A swelling took place in the glands of the arm-pit, but they did not suppurate. She applied to a physician, and from the account she gave, he pronounced her disease to be venereal, and that she had given suck to a *foul* child; and ordered ten boxes of mercurial ointment to be rubbed in on her legs and thighs, eight of which had been used when I saw her, and then her mouth was become extremely sore.

These circumstances came to the ears of the family, and an alarm took place. The husband went from surgeon to surgeon, and from physician to physician to know if it was possible for him to have the disease for fourteen years, and never to have perceived a single symptom of it in all that time: or if it was possible he could get children with the disease now, when the two first were healthy. He also wanted to know, if it was possible for his wife to have caught the disease from under such circumstances; and also, if she could breed children with

* She had but one breast that gave milk.

this disease, although she herself never had a single symptom of it. If we take all the above mentioned circumstances as facts, it was impossible there could be any thing venereal in the case; but as they could not be absolutely proved to be facts, there remained a doubt in the mind, a something still to be proved.

Now let us see what the result of the case itself says. The nurse's mouth was become extremely sore from the mercury when I first saw her. I desired that Mr. Pott might see her along with me; and it was the opinion of us both, that the sores on the nipple and round it were not venereal; but it was alledged, that as she had taken mercury, their not having a venereal appearance now was owing to that cause. The bark was given, as also the sarsaparilla, but the sores did not heal, nor did they get worse; nor did the mouth get better by leaving off the mercury; they both, as it were, became stationary. I ordered the hemlock, but that appeared to have no effect. While this was going on, eruptions broke out on the skin. The skin of the hands and fingers peeled off, the nails of both fingers and toes separated, and sores formed about their roots, which were all supposed (by many) to be venereal. But some of them appearing while the constitution was full of mercury, and others disappearing without any further use of that medicine, I was clear they were not. We suspected that her mode of living was such as contributed greatly to the continuance of her first complaint, and gave rise to the new ones; she looked dejected and sallow. She was desired to go into an hospital, which she did. As soon as she got into a warm bed, and had good wholesome food, she began to mend, and in about five or six weeks she had got fat and almost well, the sore only about the root of the nail of the great toe had not healed; but that appeared now to be owing to the root of the nail being detached, therefore acting as an extraneous body. She came out of the hospital before this toe had got well, and by returning to her old poor mode of living the soreness in the mouth returned; however she mended in the end without the use of more mercury.

This case I shall further consider when on diseases resembling the venereal.

The following case will further prove that we often suspect complaints to be venereal when they really are not.

A gentleman had for some time blotches on his skin. The face, arms, legs and thighs, were in many places covered with them, and they were in their different stages of violence. In this situation he applied to me; and I must own they had a very suspicious appearance. I asked him what he supposed these blotches were; he said he supposed them to be venereal. I asked him when he had a recent venereal complaint; he told me not for above twelve months. I then asked him how long he had had the blotches; and the answer was, above six months. As this was a sufficient time for making observations upon them that might ascertain better than the mere appearance what they were, I asked him if any of the blotches that came first had disappeared in that time, and he said many; I desired to see where those had been; and on examining I found only a discoloured skin, common to the healing of superficial sores. I then declared to him that they were not venereal, for none would have disappeared if they had. He now informed me, that he had been taking mercury; and this information obliged me to have recourse to further inquiries; and I therefore asked him, whether, while he was taking mercury, many of the first got well; The answer was, yes. And was the cure of those imputed to the mercury? The answer was again, yes. I then asked him, if, while he was taking the mercury, which appeared to have cured some, did those that now remain, arise? Yes. My next question was, how long had he taken mercury? He said for six months. I then declared they were not venereal, nor ever had been venereal. I asked him, what was now the opinion of his surgeon? He said that his opinion still was, that they were venereal, and that he should go on with the mercury. I advised him to take no medicines whatever: to live well, avoiding excess, and to come to me in three weeks; which he did, and then he was perfectly well, only the skin was stained where the blotches had been He now asked me, what he was next to do? I told him he might go to the sea and bathe for a month. This he did, and returned well and healthy, and has continued so. The impropriety of giving mercury

where the case is not venereal, to indulge the wishes of the patient, is obvious, since it is confirming his suspicions, injuring his constitution, and when the medicine fails, making him believe himself incurable, since, the symptoms have not yielded to the only medicine capable, in his opinion, of removing them.

III. OF THE LOCAL EFFECTS ARISING FROM THE CONSTITUTION CONSIDERED AS CRITICAL—SYMPTOMATIC FEVER.

How far the eruptions or local effects of this disease arising from the constitution are an effort of nature to clear herself of this disease, is not certain. I observed, that a gonorrhœa might be produced by a general law in the animal œconomy by which it endeavours to relieve itself of the irritation by producing a discharge; and that in chancres a breach is made in the solids for the same purpose, although this purpose is not answered in either; nature not having a provision against this poison. But how far a similar attempt takes place in a lues venerea I do not know; and if it was upon the same principle, the same reason might be expected to be given, why the constitution is not capable of relieving itself in the present instance that was given when treating of the primary affections, because in this as it was in the other, the matter formed might be supposed to be venereal; and therefore by being absorbed by the very surface which produced it as in a chancre, it might keep up the constitutional disease. If this were really the case it would be very different from many other specific diseases; for the reason why many specific diseases cure themselves is, that the irritation cannot last beyond a stated time; and also that in many, the patient is never susceptible of the same disease a second time, as in the small-pox. If this was not the case, a person once having the small-pox would always have them; for according to one supposition, that absorption of its own pus keeps up the disease; and according to another, that the irritation never wears itself out, the patient would either never be free, or have them

repeated for ever: for his own matter would give the disease a second time, a third time, and so on.* But the venereal matter when taken into the constitution produces an irritation which is capable of being continued independent of a continuance of absorption; and the constitution has no power of relief; therefore alues venerea continues to encrease. This circumstance is perhaps one of the best distinguishing marks of the lues venera, for in its ulcers and blotches it is often imitated by other diseases, which not having this property, will therefore heal and break out again in some other part; diseases in which this happens show themselves not to be venereal; however we are not to conclude, because they do not heal of themselves and give way only to mercury, that therefore they are venereal, although this circumstance joined to others gives a strong persumption of their being such.

When the parts contaminated assume the venereal action, we commonly find fever, restlessness or want of sleep, and often headach; but I believe that these symptoms are rather peculiar to the disease when the second order of parts, the periosteum and bones, come into action, although they are sometimes found of the first. Do these symptoms arise from the local irritations affecting the constitution? And are they merely sympathetic? Whatever the immediate cause may be, they never go off till the local irritations are removed. This fever at first has much the appearance of the rheumatic fever, and after a time it partakes a good deal of the nature of the hectic.

These symptoms often take place independent of or unattended by any local action; and when that is the case, it becomes very uncertain what the disease is; for we may observe, that in the proof of any point which cannot be made out directly, it is the concurrence of circumstances that becomes the proof. Many of these symptoms give way to mercury, which is probably the only concurring circumstance attend-

* This circumstance alone is a strong proof that people cannot have the small-pox twice, at least at any distance of time between, if they had fair eruptions the first time; for if the constitution was not so altered as not to be susceptible of this irritation a second time, a person would have them immediately upon the going off of the first.

ing this complaint that is a proof of its being venereal.* It rather however appears to be against this idea, that for the most part a much smaller quantity is sufficient for the cure of such symptoms than what is necessary for the cure of local complaints. But if mercury always cured them, it would not be very material what they were called. It is worth consideration however, how far the venereal poison when in the constitution does or does not always produce local effects; that it, in general, does, we are certain; but whether it is ever a cause of constitutional symptoms, simply, such as loss of appetite, wasting, debility, want of sleep, and fever, at last becoming hectic, is uncertain; and it is also uncertain if it is ever capable of producing local actions from irritations only without an alteration of the structure of the parts irritated, as cough, secretion from the lungs, purging, headachs, sickness, pains in different parts of the body like rheumatic pains, but not from an alteration of the structure of the part taking place, as beginning nodes. If such effects take place, we must in such a case rely entirely on the history of the disease, and pronounce according to probability. Such complaints come oftener under the management of the physician than the surgeon, to whom I would recommend a particular attention to this subject.

The fever in consequence of the venereal irritation, like most other fevers, deranges the constitution, which, thereupon, assumes such actions as it has the greatest tendency to. It is capable of producing glandular swellings in many parts of the body, and probably many of the nodes, that arise in the time of this fever, may proceed from the fever, and similar to every such effect from whatever cause it does not partake of the disease which produced it, for it is not venereal: it only takes place in constitutions very susceptible of such action where the predisposing cause is strong and probably at seasons most fitted to produce it, only waiting the immediate cause to put them into action, such will and do go away of themselves when the predisposing cause ceases, such as season.

* Here it is to be understood, that having had the disease in the form of gonorrhœa or chancre, is not to be considered as strong evidence.

IV. OF THE LOCAL AND CONSTITUTIONAL FORMS OF THE DISEASE NEVER INTERFERING WITH ONE ANOTHER.

I OBSERVED when treating of the gonorrhœa, and chancre, that they do not interfere when occurring in the same person, the one neither increasing the symptoms, nor retarding the cure of the other. And it may also be observed, that the chancre or gonorrhœa and the constitutional form of the disease meeting in the same person do not interfere with each other, either in their symptoms or cure; therefore a man may have any one of the kinds, and then get another without increasing the first, or having the last increased by the first.

To explain these effects more fully, let me observe, that if a man has a gonorrhœa, and a chancre appears some days after, the chancre does not either increase or diminish the gonorrhœa. Again, if a man has either a gonorrhœa, a chancre, or both, and a lues venerea ensue in consequenee of either of these, neither the gonorrhœa nor chancre is affected by it. If a man has a lues venerea and gets either a gonorrhœa, or chancre, or both, neither of them affects the lues venerea, nor are their symptoms the worse. Nor is the cure of either singly, retarded by the presence of the other; for a gonorrhœa is as easily cured when there are chancres, as when there are none, even although the chancres arenot attempted to be cured; and a chancre may be cured locally independent of the gonorrhœa. Further, a gonorrhœa, chancre, or both, may be as easily cured, when the constitution is poxed either by them, or previous to their appearance, as when the person is in perfect health; but the chancre has this advantage, that the constitution cannot be cured without its being likewise cured.

The gonorrhœa and chancre indeed so far influence one another, as the one can be in some degree a cause of prevention of the other, as has been already observed; but I believe that this circumstance does not assist in the cure of either, yet I could conceive it might, each acting as a derivator to the other, without increasing its own specific mode of action.

V. OF THE SUPPOSED TERMINATION OF THE LUES VENEREA IN OTHER DISEASES.

This disease seldom or ever interferes with other disorders, or runs into, or terminates in any other, although it has been very much accused of doing so; for a termination of one disease in another, as I understand the expression, must always be a cure of the one terminated; but the venereal disease never terminates till the proper remedy is applied, and therefore never can run into any other disease.

That venereal complaints may be the cause of others, I think is very probable. I have seen a chancre the immediate cause of an erisypelatous inflammation, but the venereal did not terminate in the erisypelatous inflammation, for if it had, the chancre would have been cured; nor was the erisypelatous inflammation venereal; the chancre only acted here as a common irritator, independent of the specific quality of the disease as a cause. I have known a venereal bubo become a scrofulous sore as soon as the venereal action was destroyed by mercury: this was not a venereal terminating in a scrofulous affection, for in such a view the scrofula must have cured the venereal. The venereal disease would seem only to partake of the nature of such disorders as the constitution was previously disposed to, and may push into action the causes of these disorders. The same observation and mode of reasoning holds equally good with respect to other diseases. The common symptoms, however, of the lues venerea, though in some degree according to the constitution, are not so much so as either in the chancre, or the gonorrhœa; for the lues venerea is attended with very little inflammation, which, in general, partakes much more of the nature of the constitution than any other diseased action.

VI. OF THE SPECIFIC DISTANCE OF THE VENEREAL INFLAMMATION.

I have already observed, that many specific diseases, as also those arising from poison, have their local effects confined to certain distances, which I have called their local specific distance; and it would appear from observation, that the venereal irritation and inflammation, of whatever kind it may be, is guided by this principle; for it seldom extends far beyond the surface that receives it; the neighbouring part not having a tendency to sympathise, or run easily into this kind of inflammation. This is the reason why we find a gonorrhœa for weeks confined to one spot in the urethra in men, and for months to the vagina in women, not extending farther in either. In chancres, also, the inflammation is confined to the seat of the sore, without becoming so diffused as when from common accidents. As a further proof of this fact, we find it is also confined to the glands of the groin, in cases of buboes, till matter is formed in them; which matter acts as a common irritator, and the specific is in some degree lost, and then the inflammation becomes somewhat more diffued, as happens in common inflammation. We also see that the same thing happens in venereal ulcers when they arise from the constitution; their size is at first but small, and they are merely local; but as the disease encreases, the size encreases; but still they remain circumscribed, not becoming diffused. Perhaps all poisons and specific diseases agree in this property of having their inflammation limited and circumscribed in a manner peculiar to themselves, for we find that the inflammation of the small-pox, measles, and chicken-pox, is each circumscribed in its own way. From hence it must appear, that the human body in general is not so susceptible of specific irritations as it is of the common, or what may be called the natural. But we must also consider, that the common inflammation, in very healthy constitutions, has its specific distance, although not so determined or circumscribed as is that of the specific in such constitutions; therefore we may reasonably suppose, that such healthy constitutions are the furthest in disposition from the

inflammatory action; and we may also suppose still more so from the specific. What would appear to strengthen this idea is, that when the constitution is such as readily goes into inflammation, the more readily does the inflammation spread, every part being susceptible of such action; and we find that in many the specific also spreads, although not in so great a degree; from which we may suppose, that the specific is always a more confined mode of action. I have suspected, that when the body was disposed to increase the inflammation beyond the specific distance, it was of the erisypelatous kind, as was mentioned before, and which is to be attended to in the cure.

VII. OF THE PARTS MOST SUSCEPTIBLE OF THE LUES VENEREA —OF THE TIME AND MANNER IN WHICH THEY ARE AFFECTED—WHAT IS MEANT BY CONTAMINATION, DISPOSITION AND ACTION--SUMMARY OF THE DOCTRINE.

When I assigned the causes for so great a difference in the effects of the same poison upon two different surfaces, as forming the gonorrhœa and chancre, I then said I did not know whether similar surfaces in every part of the body were equally susceptible of this irritation, having but few comparative trials of the direct application of the poison to other parts besides those of generation. But it would appear that some parts of the body are much less susceptible of the lues venerea than others; and not only so, but many parts, so far as we know, are not susceptible of it at all. For we have not yet had every part of the body affected; we have not seen the brain affected, the heart, stomach, liver, kidneys, nor other viscera, although such cases are described in authors. But as there are different orders of parts respecting the times of the disease appearing, and as the person commonly flies to relief upon the first or second appearances, it may be supposed that the whole disease in the parts actually affected is cured before the other parts have had time to come into action, which will therefore be cured under the state of a disposition only, if we can conceive that a cure can take place before parts have come into action. But if the parts visibly affected are cured while those

only disposed are not, and afterwards come into action, they would form a second order respecting time; and if these again are cured, and other parts under a disposition should come into action, such would form a third order of parts respecting time. The lungs have been believed to have been affected with the venereal disease, both from the circumstances preceding the complaint, and from the complaint itself being cured by mercury; and their being affected when the other viscera are not, may arise from their being in some degree an external surface, as will be explained hereafter.

It is this form of the disease, therefore, that gives us the comparative susceptibility of parts both for disposition and action. For we must suppose that all parts are equally and at once exposed to the action of the poison; hut though there may be various degrees of susceptibility, it will be sufficient for practice to divide them into two, under the following appellations of *first in order*, and *second in order*, to which we may add the intermediate.

Whether the parts that are really first affected are naturally more easily affected by this kind of irritation, or that some other circumstance which belongs to these parts is the cause, cannot be absolutely determined; but from considering the matter attentively, it would appear to be owing to something foreign to the constitution, and also not depending on the nature of the parts themselves; for if we take a view of all the parts that are first affected by this disease when arising from the constitution, which I shall suppose are the parts most susceptible of it, we shall see that in the recent state of the disease these parts are subject to one general affection, while there are similar parts of the body not affected by this disease, and not subject to this general affection. Probably the parts second in order may naturally be as susceptible of the irritation as those first in order; but not being under the influence of an irritating cause, they are later in coming into action; and there are also probably other causes in the nature of the parts themselves, such as being indolent in all their actions, and of course indolent in this, therefore later in coming into action. However, it is not universally the case that the parts which I have called first in order, are always so; on

the contrary, we find that this order is inverted in some cases, although but rarely. We cannot suppose that this difference arises from any active power in the poison, nor any particular direction of it, but from properties in the parts themselves; for it may be allowed us to suppose, that when this matter has got into the circulation, it acts on all parts of the body with equal force; that is, it is not determined to any one part more than another by any general or particular power in the animal machine; nor is the nature of the poison such as will fall more readily on one part of the body than another, when they are all in similar circumstances. That some parts, therefore, are more readily affected by it than others, owing to circumstances which are no part of the animal principle, nor of the poison; and also that some parts of the body have a greater tendency to be irritated by it than others, must be allowed.

The parts that are affected by this form of the disease when in its early stage or appearance, which I have called first in order, are the skin, tonsils, nose, throat, inside of the mouth, and sometimes the tongue.* When in its later state, the periosteum, fasciæ, and bones come into action, and these I call *second in order of parts*. Perhaps the bones come into action from the membrane being affected.

That we may be able to account in some measure for these similar effects as to time in dissimilar parts, such as the skin and the tonsils, two very different kinds of parts, let us consider in what circumstance they agree, and why they are more susceptible of this irritation than those parts that probably are naturally as much so, although they do not take it on so readily, such as the periosteum, fasciæ, and bones.

The most remarkable circumstance, perhaps, to which the external surface is exposed, and to which the internal is not, is cold, or a succession of different degrees of cold. For we may observe in general, that

* The tongue is very subject to have ulcers formed on it, especially on its edges. They are seldom very large, nor are they often either very foul, or have a hard basis: these are commonly supposed to be venereal; but I believe they seldom are. I do not know whether I am, or not, acquainted with the distinguishing marks. I never saw but one that I suspected to be either venereal or cancerous, from its foul look and its hard basis. It gave way readily to mercury; therefore I supposed it to be venereal.

the atmosphere, in which we live is colder than the human body* in its usual temperature, therefore the skin, &c. is continually exposed to a cold greater than what the internal parts are; and we find that all those parts which are most exposed to this, admit of being much more easily affected, or come more readily into action in this disease than the others.

It is certain that cold has very powerful effects on the animal œconomy. It would at least appear to have great powers of disposing the body for receiving the venereal irritation, and going readily on with it.

From this idea we may account for several circumstances respecting this disease; why the mouth, nose, and skin are the most frequently affected by it, because they are most susceptible of it from the causes before mentioned, and for the same reason they come more readily into action. If this is a true solution, it also accounts for those second in order; for if the poison has contaminated both the order of parts as to the susceptibility and time of coming into action, it is natural to suppose that those parts that are as it were predisposed by the common causes, and therefore most easily affected, viz. the surfaces that are most exposed shall come first into action; the parts exposed to cold in the next degree, forming the second in order, come next into action, such as bones, periosteum, &c. but even in them it is not in every bone alike, or every part alike in any one bone; for it appears first in those that are in some measure within the power of being affected by sympathy from application of cold to the skin: we find that when the deeper seated parts, or the parts second in order come into action, such as the periosteum or bones, it is first in these that are nearest the external surface of the body, such as the periosteum or bones of the head, the tibia, ulna, bones of the nose, &c. nor does it affect these bones on all sides equally, but first on that side next the external surface. However, it would appear that in the bones there is another cause besides the vicissitudes of weather, why this disease should attack them;

* It is to be understood that this cannot hold good as an universal principle; it can only take place in the temperate and frigid zone; for in the torrid the heat of the surrounding atmosphere is sometimes greater than that of the human body.

for the periosteum of bones, or bones themselves, are not liable to be diseased on all parts in proportion to the distance from the skin, the periosteum which covers the ankles, or many of the joints being as near the external surface as many other parts of the periosteum or bones that are affected. The nature of the bones themselves which are covered by that periosteum are somewhat different, they are softer in their texture, therefore they would seem to be affected in proportion to their nearness to the skin and hardness of the bones jointly; which would incline us to believe that the bones are more easily affected, and rather have some influence upon the periosteum in this disease, than the periosteum upon them; and this susceptibility in the hard bones would appear to be in proportion to their quantity of earth and exposure to cold combined.

It may be objected to this theory, that the fore part of the tibia, &c. cannot be really colder than the back part; but then it may be supposed, that it is not necessary that the part should be actually cold, but only within the power of sympathy. For a part that is not actually cold is capable of being affected from it sympathising with a cold part in the same manner as if actually cold; although perhaps not in so great a degree, and therefore requires a longer time to come into action than if it were actually cold. We find, for example, that when the skin is actually cold, the muscles underneath are thrown into alternate action, so that we tremble, or our teeth chatter with cold, and yet it is possible that these muscles may not be colder at this time than any other; although it is most probable that they are really colder,* which will assist the power of sympathy. So far as cold can affect the actions of parts, so far also will the sympathising part be affected in proportion as it is nearer to the parts actually cold; therefore the deeper seated parts in the venereal disease are later in coming into action.

The actual cold parts come first into action, then those that are less so, and next those that are nearest in sympathy, and so on, except the parts first in order of susceptibility have been noly partially cured, and

* Vide Philosophical Transactions, vol. 68, part I. page 7.

then their recurrence may correspond with the action of those that are second in order of susceptibility, and all the parts will come into action together. What would seem to strengthen this opinion is, the different effects that arise from different climates: in warm climates the disease seldom or ever arises to such a height as in cold climates; it is more slow in its progress and much more easy to cure, at least if we may give credit to the accounts we have received of the disease in such climates.

Whether the difference in the time of appearance between the superficial and deeper seated parts in warm climates is the same as in cold ones, I do not know; but from the above theory it should not be so great in the warm as in the cold climates.

Besides the causes already mentioned, it would appear that there are others by which the lues venerea may be brought sooner into action than it otherwise would be if left entirely to the nature of the constitution; for I think I have seen cases where fever has brought it into action when the disposition had been previously formed. Like most other diseases to which there is a susceptibility or disposition, we find that any disturbance in the constitution shall call it forth: scrofula, gout, and rheumatism are often called forth in this way.

Having said that the deeper seated parts of the body come into action later than those that are superficial, I shall now observe, that when the lues venerea has been cured so far as only to remove the first actions, but not to eradicate the disposition in the deeper seated parts, as has been explained, under such circumstances of the disease, it never attacks again the external, or the parts that were first affected, but only the deeper seated parts which are second in order of time. The reason is, that the deeper seated parts had not assumed the action at the time of the cure of the first. The following cases, selected from a great number of similar ones, will illustrate the doctrines we have laid down.

In January 1781, A. B. had connection with a woman, and two days after perceived an itching in the glans: at the end of four days he found chancres upon the prepuce. He took about twenty grains of calomel, and then applied to a surgeon, under whose care he remained three months, that is, till April. He thought himself nearly well, and went

into the country, taking a few pills with him, and at the end of another month believed himself perfectly cured. Three months after, that is in August, by laying in damp sheets he caught cold, and had considerable fever, for which James's powders were given. Soon after taking that medicine, spots of a copper colour appeared upon his legs, and he had violent pains in his shin bones. By the order of a country surgeon he rubbed in about an ounce of mercurial ointment, and had a slight spitting; the pain ceased, the spots disappeared, and in a month he again conceived himself to be well; this was in October 1781. In June 1782, he had the influenza: about a fortnight afterwards his left eye inflamed, and he had a pain in the head, and a noise in his ears. Five days afterwards his throat became sore. Three weeks after the inflammation of his eye several pustules made their appearance near the anus. These symptoms remained till the 21st of August, when he came into St. George's Hospital. He rubbed in strong mercurial ointment till his mouth became sore; he sweated very much; the pain in his head remained, but the complaint in his eye, and about the anus, together with the sore throat, were totally removed.

It would appear that in this case it required some additional power acting upon the body to dispose it more readily to assume the venereal action. That cold has a strong power of this kind we have allowed, which appears in this case to have been the first immediate cause; but a fever appears to have been equally effectual in producing the second return of the symptoms.

Here was the venereal disposition in the constitution from April 1781, the time he was cured of the local complaint, till June 1782, fourteen months after; and then it reappeared eleven months after that, which periods might have been longer if it had not been called forth by the two circumstances of cold and fever.

Let us consider how far this case corresponds with the opinion of the action being easier of cure than the disposition. The first action, that is, the chancres, were perfectly cured by the quantity of mercury he took at first, for they never recurred; but the venereal matter had produced the disposition in the constitution, which was not cured by the

same quantity of mercury, for blotches appeared three months after; but all the parts that had taken on the disposition at that time had not then come into action; therefore only the parts which had come into action were cured by the second course of mercury; and the other parts which had not yet taken on the action, went on with the disposition till the influenza (which happened eleven months after) brought them into action. The first class of pocky appearances were perfectly cured by the second course of mercury, as the local had been cured by the first; for they never reappeared, not even with the second. The second set of pocky symptoms, we have observed, appeared to be perfectly cured by the third course of mercury. How far there may be a third set of pocky symptoms to come forth, time can only tell.

This case further proves that sometimes the second set of symptoms appear first, and the first second; and also shews the difference in times between the first pocky appearances after the healing of the local, and between the second appearance of the symptoms after the healing of the first.

A gentleman had a chancre in May 1781: in the same month next year, 1782, he had a gonorrhœa; and in May 1783 he had a sore throat. He had no connection with any woman from September 1782, till May 1783, which was about a fortnight before his throat became sore, and had had no immediate local complaints.

When I saw the throat first, I said it was not venereal; and he being rather of a hectic habit, was desired to go to Bristol. When at Bristol, an ulcer appeared at the root of the uvula, which made him immediately come back to London. When I saw this ulcer I said it was venereal. He now went through what I supposed was a sufficient course of mercury, and all the venereal symptoms appeared to be cured.* He went into the country about the month of August; and about the beginning of January 1784, viz. four months after the supposed cure, he felt a pain, together with a swelling, in his shin bones, for which he

* I may remark here, that only the venereal ulcer got well by the mercury, for the former excoriation of the throat continued, but was afterwards cured by bark and sarsaparilla.

went through a course of mercury which removed both the pain and the swelling.

In this case we have every reason to suppose that the disposition had taken place in the bones, or their coverings, from the same cause that affected the uvula; but the uvula came first into action, being of the first order of parts. Whether this was really the case or not, we must allow that in the parts second in order, the disposition, and not the action, did exist at the time when the disease in the uvula came into action, as also at the time when he went through a course of mercury sufficient to cure the uvula; we must allow that the disposition was not removed by the quantity of mercury which was capable of removing the disease in the uvula. From all which I would draw the following inferences in confirmation of the preceding doctrine; first, that the parts about the throat are capable of assuming the action sooner than the bones; secondly, it is probable that mercury can cure the action, and not the disposition; and thirdly, that the venereal pus is not present in the circulation while the secondary actions take place; for if it were, the parts first in order would stand an equal chance of being again contaminated, and of coming into action a second time; supposing the venereal matter still to exist in the constitution after the parts first thrown into action are absolutely cured, so as to contaminate the parts that are second in order of action, we should certainly have the parts first in order take on the disease a second and even a third time, and so on, while the second or third in order would be going on and only coming into their first action; and therefore we might have those that are first in order and those that are second in order in action at the same time. This might be carried still further, for as it is possible for the parts first in order of susceptibility to have the disease a second time, while the parts second in order are under the influence of the first infection, those first in order may be contaminated a second time from a new or fresh infection, which would be a lues venerea upon a lues venerea, a case which certainly may happen. If the matter does really continue in the constitution, it would be natural to suppose that the parts most easily affected by it would remain so as long as the poison

remained. It may indeed be alleged, that parts which have already been accustomed to this irritation and cured, are rendered by that means less susceptible of it.

If the poison were still capable of circulating after its visible effects were cured, then giving mercury in the time of a chancre can be of little service, as it can only assist in the cure of the chancre, but cannot preserve the constitution from infection, which does not agree with experience; for practice informs us, that not one in fifty would escape the lues venerea if the chancre were only cured locally; so that mercury has the power of preventing a disposition from forming, and therefore necessary to be given while we suppose absorption going on, or while there is matter that may be absorbed.

Mercury, prior to the action, will not remove the disposition, and of course will not hinder the action coming on afterwards; however, it is possible, and most probable, that the medicine while it is present will hinder the action taking place; so that no venereal complaints will take place while under the course of mercury, although the parts may be contaminated.

This is not peculiar to the venereal disease, but common to many others, and in some it may be reversed, for there are diseases whose disposition can be cured, and therefore the action prevented by such medicines as would rather increase the action if given in the time of it.

The parts first affected are more easily cured, according to our present method, than the parts second in order. A part once perfectly cured is never irritated again by the same stock of infection, though probably some other parts in the constitution are still under the venereal irritation. If the facts stated be just, the circumstance of the disease appearing to leave the parts first attacked, and attacking the secondary parts is easily accounted for. It is no more than the first parts being cured while the secondary are not, and of course going on with the disease, the first remaining well.

If this mode of accounting for these circumstances be just, it proves two things; first a former assertion, that this disease in the form of lues venerea has not the power of contaminating parts, not already under

its influence, even in the same constitution; secondly, that the venereal poison is not circulating in the blood all the time the disease is going on in the constitution; so that most probably the poison only irritates when just absorbed, and is soon expelled or thrown out in some of the secretions.

The above account of the lues venerea may be reduced to the following heads.

First, that most parts, if not all, that are affected in the lues venerea are affected with the venereal irritation at the same time.

Secondly, the parts exposed to cold are the first that take on the venereal action; then the deeper seated parts, according to their susceptibility for such action.

Thirdly, the venereal disposition when once formed in a part must necessarily go on to form the venereal action.

Fourthly, that all parts of the body under such disposition do not run into action equally fast, some requiring six or eight weeks, others as many months.

Fifthly, in the parts that come first into action the disease goes on increasing without wearing itself out, while those that are second in time follow the same course.

Sixthly, mercury hinders a disposition from forming, or in other words prevents contamination.

Seventhly, mercury does not destroy a disposition already formed.

Eighthly, mercury hinders the action from taking place although the disposition be formed; and.

Ninthly, mercury cures the action.

These principles being established, the facts respecting the cure are easily accounted for.

CHAPTER II.

OF THE SYMPTOMS OF THE LUES VENEREA.

When the venereal matter has got into the constitution in any of the ways beforementioned, it has the whole body to work upon, and shews itself in a variety of shapes, many of which putting on the appearance of a different disease, we are often obliged to have recourse to the preceding history of the case before we can form any judgment of it. Probably the varieties in the appearances may be referred to the three following circumstances; the different kinds of constitutions; the different kinds of solids affected; and the different dispositions the solids are in at the time; for I can easily conceive that a peculiarity of constitution may make a very material difference in the appearance of the same specific complaint; and I am certain that the solids according to their different natures produce a very different appearance when attacked with this disease; and I can also easily conceive that a different disposition from the common in the solids at the time, may make a considerable difference in the appearances.

The difference of constitution, and of the same parts at different times, may have considerable effects in the disease appearing sooner, or later: this I am certain of, that the different parts of the body produce a very considerable difference in the times of appearance of this disease. That it appears much sooner in some parts than in others, is best seen where different parts are affected in the same person; for I have already endeavoured to shew, that it is most probable all the parts affected are contaminated nearly at the same time. This difference in the times is either owing to some parts being naturally put into action more easily by the poison than others, or that they are naturally more active in themselves, and therefore probably will take on more quickly the action of every disease that is capable of affecting them.

When on the general history of the lues venerea, I divided the parts

into two orders, according to the time of their appearance; I also observed that the first were commonly the external parts, as the skin, nose, tonsils; and that the second were more internal, as the bones, periosteum, fasciæ, and tendons.

The time necessary for its appearance, or for producing its local effects in the several parts of the body most readily affected after it has got into the constitution, is uncertain; but in general it is about six weeks; in many cases however it is much later, and in others much sooner. In some cases it appears to produce its local effects within a fortnight after the possibility of the absorption of the matter. In one case a gentleman had a chancre, and a swelling in the groin came on, and within the beforementioned time he had venereal eruptions all over the body. He could not impute this to any former complaint, yet there is a possibility of its having arisen from the first mode of catching the disease, by simple contact, at the time he got the local or chancre, which might extend the time to a week or more, although this is not probable. In another case, three weeks after the healing of a chancre, eruptions broke out all over the body, and this happened only a fortnight after leaving off the course of mercury that cured the chancre. The effects on other parts of the body that are less susceptible of this irritation, or are slower in their action, are of course much later in appearing; and in those cases where both orders of parts are contaminated, it is in general not till after the first has made its appearance for a considerable time, and even perhaps after it has been cured; for while the parts first in order of action were contaminated and under cure, the second in order are only in a state of contamination, and go on with the disease afterwards, although it may never again appear in the first

From this circumstance of the parts second in order coming later into action, we can plainly see the reason why it shall appear in them, although the first in order may have been cured; for if the external parts, or first in order, have been cured, and the internal, or second, have not been cured, such as the tendons, bones, periosteum, &c. then it becomes confined solely to these parts. The order of parts may sometimes be inverted, for I have seen cases where the periosteum, or bone, was affected prior to any other part; whether in the same case it might in the end

have affected the skin, or throat, I will not pretend to say, as it was not allowed to go on; but it is possible the second order of parts may be affected without the first having ever been contaminated.

Its effects upon the deeper seated parts are not like those produced in the external, and the difference is so remarkable as to give the appearance of another disease; and a person accustomed to see it in the first parts only, would be entirely at a loss about the second.

The parts which come first into action go on with it, probably on the same principle, much quicker than what the others do; and this arises from the nature of the parts, as has already been observed.

Each succeeding part that becomes affected is slower and slower in its progress, and more fixed in its symptoms when produced; this arises also from the natural disposition of such parts, all their actions being slow, which indolent action may be assisted by the absence of the great disposing cause, that is cold. I should however suspect, that warmth did not contribute much to their indolence of action, for if it did, it would assist in the cure, which it appears not to do, these parts being as slow in their operations of restoration as they are in their actions of disease. We may also observe, that similar parts come sooner into action, and appear to go on more rapidly with it, as they are nearer the source of the circulation. It appears earlier on the face, head, shoulders, and breast, than on the legs, and the eruptions come sooner to suppuration in the beforementioned parts.*

The circumstance of its being very late in appearing in some parts, when it had been only cured in its first appearances, as mentioned, has made many suppose that the poison lurked somewhere in the solids; and others, that it kept circulating in the blood for years.

It is not, however, easy to determine this point, but there can be no good reason for the first hypothesis, as the lurking disposition never takes place prior to its first appearance; for instance, we never find that a man had a chancre a twelvemonth ago, and that it broke out after in venereal scurfs upon the skin, or ulcers in the throat. The slowness of its progress is only when the parts, less susceptible of its irritation, have been affected by it.

* Vide Introduction.

The Editor adds the following case to those already stated, in proof of the deviations that are met with from peculiarities of constitution, in the appearance of the secondary symptoms.

A gentleman, in the year 1794, had a chancre attended with bubo, for which, being at that time engaged in military service abroad, he went through a very imperfect course of mercury. Six weeks after he had left off taking mercury, an ulcer appeared in the upper lip, which did not yield to ordinary remedies, and was considered as venereal. He returned to England, and took mercury in the form of pills. The sore healed, and he continued the use of mercury for three weeks after it had entirely disappeared.

Six weeks afterwards a sore again appeared in the same part of the upper lip. He now went through a course of mercurial frictions, which was continued for three or four weeks after the healing of the sore.

He had no other venereal symptoms, nor any other complaints, until the end of September, 1803, (fourteen years after the chancre had appeared,) when he experienced a sensation of fullness in the nostrils, so that he could not breathe freely through them. This was unattended by pain. The sensation of fullness in the nostrils encreased, and they discharged a large quantity of puriform mucous fluid. His smell and taste became affected; and after a short time he was able to smell nothing except the odour of it was very powerful; and he could perceive the taste of nothing which he ate at meals He tried the use of many internal medicines, and some external applications, without any benefit. In the beginning of April, 1808, he first observed a tumefaction over the root of the nose, but it was not attended with any particular uneasiness. He came to London, and put himself under the care of the Editor. A bougie of a considerable size was passed into the left nostril, and met with very little obstruction. It was then passed into the right nostril, where it met with more obstruction, and grated against a portion of exposed bone. At this time there was considerable fullness over the root of the nose, and the skin was red, and about to ulcerate.

On the 13th of April he began to use mercury in the form of frictonis.

On the 22d of April his mouth was affected by the mercury.

On the 26th of April the skin had ulcerated over the root of the nose. His smell and taste were somewhat improved, and there was less discharge from the nostril.

On the 9th of May there was no more discharge from the nostrils than

natural, and it did not differ in quality from the natural mucus. He had perfectly recovered his smell and taste.

On the 28th of May the orifice of the abscess at the root of the nose was completely closed; he breathed freely through the nostrils, and there was no appearance of fullness externally.

He continued perfectly well; but the mercurial course was continued for some weeks longer.

I. OF THE SYMPTOMS OF THE FIRST STAGE OF THE LUES VENEREA.

The first symptoms of the disease after absorption appear either on the skin, throat, or mouth; these differ from one another according to the nature of the parts affected, therefore I shall divide them into two kinds, although there appears to be no difference in the nature of the disease itself.

The appearance on the skin I shall call the first, although it is not always the first appearance; for that in the throat, is often as early a symptom as any. The appearances upon the skin generally show themselves in every part of the body, no part being more susceptible than another, first in discolourations, making the skin appear mottled, many of them disappearing, whilst others continue, and increase with the disease.*

In others it will come on in distinct blotches, often not observed till scurfs are forming; at other times they appear in small distinct inflammations, containing matter and resembling pimples, but not so pyramidal, nor so red at the base.

Venereal blotches at their first coming out are often attended with inflammation, which gives them a degree of transparency, which I think is generally greater in the summer, than in the winter, especially if the patient be kept warm. In a little time this inflammation disappears, and the cuticle peels off in the form of a scurf. This sometimes

* This is not peculiar to this disease, it often takes place in the smallpox. It appears as if the skin took on a general disposition for disease, but the specific taking place and remaining, the other eruptions disappear. If this is really the case in the lues venerea, it must be a consequence of fever.

misleads the patient, and the surgeon, who look upon this dying away of the inflammation as a decay of the disease, till the succession of scurfs undeceive them.

These discolourations of the cuticle arise from the venereal irritation, and are seldom to be reckoned a true inflammation, for they seldom have any of its characteristics, such as tumefaction and pain; but this is true only on those parts most exposed; for in parts well covered, and in parts constantly in contact with other parts there is more of the true inflammatory appearance, especially about the anus.

The appearance of the parts themselves next begins to alter, forming a copper coloured dry inelastic cuticle, called a scurf: this is thrown off, and new ones are formed. These appearances spread to the breadth of a sixpence or shilling, but seldom broader, at least for a considerable time, every succeeding scurf becoming thicker and thicker, till at last it becomes a common scab, and the disposition for the formation of matter takes place in the cutis under the scab, so that at last it turns out a true ulcer; in which state it commonly spreads, although but slowly.

These appearances arise first from the gradual loss of the true sound cuticle; the diseased cutis having lost the disposition to form one; and as a kind of substitute for this want of cuticle, an exudation takes place forming a scale, and afterwards becoming thicker, the matter acquiring more consistence, it at last forms a scab; but before it has arrived at this stage the cutis has given way and ulcerated, which continues gradually to change the discharge more and more into a truer matter or pus. When it attacks the palms of the hands and the soles of the feet, where the cuticle is thick, a separation of the cuticle takes place, and it peels off, a new one is immediately formed, which also separates, so that a series of new cuticles takes place from its not so readily forming scurfs as on the common skin. If the disease is confined to those parts, it becomes more difficult to determine whether or not it be venereal; for most diseases of the cutis of these parts produce a separation of the cuticle attended with the same appearances in all, and having nothing characteristic of the venereal disease.

Such appearances are peculiar to that part of the common skin of the body which is usually exposed; but when the skin is opposed by

another skin which keeps it in some degree more moist, as between the nates, about the anus, or between the scrotum and the thigh, or in the angle between the two thighs, or upon the prolabium of the mouth, and in the arm-pits, the eruptions never acquire the abovedescribed appearances, and instead of scurfs or scabs we have the skin elevated, or as it were tumefied by the extravasated lymph into a white, soft, moist, flat surface, which discharges a white matter. This may perhaps arise from there being more warmth, more perspiration, and less evaporation, as well as from the skin being thinner in such places. What strengthens this idea still more is, that in many venereal patients I have seen an approach towards such appearances on the common skin of the body; but then it was on such parts as were covered with the clothes; for on those parts of the skin that were not covered there was only the flat scurf: these, however, were redder than the above described appearances, but hardly so high.

How far this is peculiar to the venereal disease I know not, as it may take place in most scurfy eruptions of the skin. From a supposition of this not being venereal, I have destroyed them at the side of the anus with caustic, and the patient has got well; however, from my idea of the disease, that every effect from the constitution is truly local, and therefore may be cured locally, this treatment having proved a cure, does not determine the question.

This disease on its first appearance often attacks that part of the fingers upon which the nail is formed, making that surface red which is seen shining through the nail, and if allowed to continue, a separation of the nail takes place, similar to the cuticle in the beforedescribed symptoms; but here there cannot be that regular succession of nails as as there is of cuticle.

It also attacks the superficies of the body which is covered with hair, producing a separation of the hair; a prevention of the growth of young hair is also the consequence while the disease lasts.

The second part in which it appears is most commonly the throat, sometimes the mouth and tongue. In the throat, tonsils, and inside of the mouth, the disease generally shows itself at once in the form of an ulcer without much previous tumefaction, so that the tonsils are not

much enlarged; for when the venereal inflammation attacks these parts it appears to be always upon the surface, and it very soon terminates in an ulcer.

These ulcers in the throat are to be well distinguished from all others of the same parts. It is to be remarked, that this disease when it attacks the throat, always I believe produces an ulcer; although this is not commonly understood; for I have seen cases where no ulceration had taken place, called by mistake venereal; it is therefore only this ulcer that is to be distinguished from other ulcers of these parts. This species of ulcer is generally tolerably well marked, yet it is perhaps in all cases not to be distinguished from others that attack this part, for some shall have the appearance of being venereal, and what are really venereal shall resemble those that are not. We have several diseases of this part which do not produce ulceration on the surface, one of which is common inflammation of the tonsils, which often suppurates in the centre, forming an abscess, which bursts by a small opening, but never looks like an ulcer began upon the surface as in the true venereal; and this case is always attended with too much inflammation, pain, and tumefaction of the parts to be venereal: and if it suppurates and bursts it subsides directly, and it is attended probably with other inflammatory symptoms in the constitution.

There is another disease of these parts, which is an indolent tumefaction of the tonsils, and is peculiar to many people or constitutions, having something of the scrofula in them, producing a thickness in the speech. Sometimes the coagulable lymph is thrown out on the surface, and called by some ulcers, by others sloughs, and such are often called putrid sore throats. Those commonly swell to too large a size for the venereal; and this appearance is easily distinguished from an ulcer or loss of substance: however, where it is not plain at first sight, it will be right to endeavour to remove some of it; and if the surface of the tonsil is not ulcerated, then we may be sure it is not venereal. I have seen a chink filled with this, appearing very much like an ulcer; but upon removing the coagulable lymph the tonsil has appeared perfectly sound. I have seen cases of a swelled tonsil where a slough formed in its centre,

and that slough has opened a passage out for itself; and when it has been as it were sticking in this passage, it has appeared like a foul ulcer.

The most puzzling stage of the complaint is when the slough is come out, for then it has most of the characters of the venereal ulcer; but when I have seen the disease in its first stages, I have always treated it as of the erisypelatous kind, or as something of the nature of a carbuncle.

When I have seen them in their second stage only I have been apt to suppose them venereal; however, no man will be so rash as to pronounce what a disease is from the eye only, but will make inquiries into all the circumstances before he forms a judgment. If there have been no preceding local symptoms within the proper date, he will suspend his judgment, and wait a little to see how far nature is able to relieve herself. If there has been any preceding fever, it will be still less probable that it is venereal. However, I will not say of what nature such cases are, but only that they are not venereal, as they are often believed to be. I have seen a sore throat of this kind taken for venereal, and mercury given till it should affect the mouth, which when it did it brought on a mortification on all those parts concerned in the first disease, so that the tonsils and the uvula mortified and sloughed away. It would therefore appear that this species of the sore throat is aggravated by mercury.

There is another complaint of those parts which is often taken for venereal, which is an ulcerous excoriation, where the ulceration or excoriations run along the surface of the parts, becoming very broad and sometimes foul, having a regular termination, but never going deep into the substance of the parts as the venereal do. There is no part of the inside of the mouth exempted from this ulcerous excoriation; but I think it is most frequent about the root of the uvula, and spreads forwards along the palatum molle. That such are not venereal, is evident from their not giving way in general to mercury; and I have seen them continue for weeks without altering, and a true venereal ulcer appear upon the centre of the excoriated part,

The difference between the two is so strong that there can be no

mistake; the patients have gone through a course of mercury, which has perfectly cured the venereal ulcers, but has had no effect upon the others, which were afterwards cured by bark.

The true venereal ulcer in the throat is perhaps the least liable to mistake of any of the forms of the disease. It is a fair loss of substance, part being dug out as it were from the body of the tonsil, with a determined edge, and is commonly very foul, having thick white matter adhering to it like a slough, which cannot be washed away.

Ulcers in such situations are always kept moist, the matter not being allowed to dry and form scabs, as in those upon the skin; the matter is carried off the ulcers by deglutition, or the motion of the parts, so that no succession of scurfs or scabs can take place, as on the skin.

Their progress is also much more rapid than on the common skin, ulceration taking place very fast.

Like most other spreading ulcers they are generally very foul, and for the most part have thickened or bordered edges, which is very common to venereal or cancerous sores, and indeed to most sores, which have no disposition to heal, whatever the specific disease may be.

When it attacks the tongue, it sometimes produces a thickening and hardness in the part; but this is not always the case, for it very often ulcerates as in the other parts of the mouth.

They are generally more painful than those of the skin; although not so much so, as common sore throats arising from inflamed tonsils.

They oblige the person to speak thick, or as if his tongue was too large for his mouth, with a small degree of snuffling.

These are the most common symptoms of this stage of the disease; but it is perhaps impossible to know all the symptoms this poison produces when in the constitution. I knew a gentleman who had a teasing cough, which he imputed to it; for it came on with the symptomatic fever and continued with it, and by using mercury both disappeared.

There are inflammations of the eyes which are supposed to be venereal; for, after the usual remedies against inflammation have been tried in vain, mercury has been given on the supposition of the case being venereal, and sometimes with success, which has tended to establish this

opinion. But if such cases are venereal, the disease is very different from what it is when attacking other parts, from the constitution, for the inflammation is more painful than in venereal inflammation proceeding from the constitution; and I have never seen such cases attended with ulceration, as in the mouth, throat, and tongue, which makes me doubt much of their being venereal.

II. EXPERIMENTS MADE TO ASCERTAIN THE PROGRESS AND EFFECTS OF THE VENEREAL POISON.

To ascertain several facts relative to the venereal disease, the following experiments were made. They were begun in May 1767.

Two punctures were made on the penis with a lancet dipped in venereal matter from a gonorrhœa; one puncture was on the glans, the other on the prepuce.

This was on a Friday; on the Sunday following there was a teasing itching in those parts which lasted till the Tuesday following. In the mean time these parts being often examined, there seemed to be a greater redness and moisture than usual, which was imputed to the parts being rubbed. Upon the Tuesday morning the parts of the prepuce where the puncture had been made were redder, thickened, and had formed a speck; by the Tuesday following the speck had increased and discharged some matter, and there seemed to be a little pouting of the lips of the urethra, also a sensation in it in making water, so that a discharge was expected from it; the speck was now touched with lunar caustic, and afterwards dressed with calomel ointment. On Saturday morning the slough came off, and it was again touched, and another slough came off on the Monday following. The preceding night the glans had itched a good deal, and on Tuesday a white speck was observed where the puncture had been made; this speck when examined was found to be a pimple full of yellowish matter. This was now touched with the caustic, and dressed as the former. On the Wednesday the sore on the prepuce was yellow, and therefore was again touched with the caustic. On the Friday both sloughs came off, and the sore on the prepuce looked red, and its basis

not so hard; but on the Saturday it did not look quite so well, and was touched again; and when that went off it was allowed to heal up, as also the other, which left a dent in the glans. This dent on the glans filled up in some months, but for a considerable time it had a bluish cast.

Four months afterwards the chancre on the prepuce broke out again, and very stimulating applications were tried; but these seemed not to agree with it, and by letting it alone it healed up. This it did several times afterwards, but always healed up of itself. That on the glans never did break out; and herein also it differed from the other.

While the sores remained on the prepuce and glans, a swelling took place in one of the glands of the right groin. I had for some time conceived an idea, that the most effectual way to put back a bubo was to rub in mercury on that leg and thigh, which would send a current of mercury through the inflamed gland; this afforded a good opportunity of making the experiment. I had often succeeded in this way, but now wanted to put it more critically to the test.* The sores upon the penis were healed before the reduction of the bubo was attempted. A few days after beginning the mercury in this method the gland subsided considerably, it was then left off; for the intention was not to cure it completely at present. The gland some time after began to swell again, and as much mercury was rubbed in as appeared to be sufficient for the entire reduction of the gland; but it was meant to do no more than to cure the gland locally, without giving enough to prevent the constitution from being contaminated.

About two months after the last attack of the bubo, a little sharp pricking pain was felt in one of the tonsils in swallowing any thing; and on inspection a small ulcer was found, which was allowed to go on till the nature of it was ascertained, and then recourse was had to mercury. The mercury was thrown in by the same leg and thigh as before, to secure the gland more effectually, although that was not now probably necessary.

As soon as the ulcer was skinned over the mercury was left off, it not

* The practice in 1767 was to apply a mercurial plaister on the part, or to rub in mercurial ointment on the part, which could hardly act by any other power than sympathy.

being intended to destroy the poison, but to observe what parts it would next affect. About three months after, copper coloured blotches broke out on the skin, and the former ulcer returned in the tonsil. Mercury was now applied the second time for those effects of the poison from the constitution, but still only with a view to palliate.

It was left off a second time, and the attention was given to mark where it would break out next, but it returned again in the same parts. It not appearing that any further knowledge was to be procured by only palliating the disease a fourth time in the tonsil, and a third time in the skin, mercury was now taken in a sufficient quantity, and for a proper time, to complete the cure.

The time the experiments took up, from the first insertion to the complete cure, was about three years.

The above case is only uncommon in the mode of contracting the disease, and the particular views with which some parts of the treatment were directed; but as it was meant to prove many things, which, though not uncommon, are yet not attended to, attention was paid to all the circumstances. It proves many things, and opens a field for further conjectures.

It proves, first, that matter from a gonorrhœa will produce chancres.

It makes it probable, that the glans does not take on the venereal irritation so quickly as the prepuce. The chancre on the prepuce inflamed and suppurated in somewhat more than three days, and that on the glans in about ten: this is probably the reason why the glans did not throw off its sloughs so soon.

It renders it highly probable, that mercury applied to the legs and thighs, is the best method to resolve a bubo; and therefore, also, the best method of applying mercury to assist in the cure, even when the bubo suppurates.

It also shews that buboes may be resolved in this way, and yet the constitution not be safe; and therefore that more mercury should be thrown in, especially in cases of easy resolution, than what simply resolves the bubo.

It shews that parts may be contaminated, and not having taken on

the action, may have the poison kept dormant in them while under a course of mercury for other symptoms, but break out afterwards.

It also shews, that the poison having originally only contaminated certain parts, when not completely cured, can break out again only in those parts.

III. OF THE SYMPTOMS OF THE SECOND STAGE OF THE LUES VENEREA.

This stage of the disease is not so well marked as the former, and as it is of more importance, it requires all our discernment to determine what the disease is.

The parts less susceptible of this irritation are such as are more out of the way of the great exciting cause, which is the external air, as has been before related. And they begin to take on the venereal action, whether it may or it may not have produced its local effects upon the external or exposed surfaces; and they even go on with the action in many cases after these surfaces, first affected, have taken on the action and have been cured, as has been already observed. These deeper seated parts are the periosteum, tendons, fasciæ, and ligaments; however, what the parts affected may be when the disease is in this stage, is not always certain; I have known it produce total deafness, and some of those cases to end in suppuration, attended with great pain in the ear, and side of the head; such cases are generally supposed to arise from other cause; and nothing but some particular circumstance in the history of the case, some symptom attending it, or a lucky idea striking the surgeon, can lead to the nature of the complaint.

When these deeper seated parts become irritated by this poison, the progress is more gradual than in the first; they have very much the character of scrofulous swellings, or chronic rheumatism, only in this disease the joints are not so subject to it as they are in the rheumatism. We shall find a swelling come upon a bone when there has been no possible means of catching the infection for many months, and it will be of some size before it is taken notice of, from having given but little pain.

On the other hand, there shall be great pain, and probably no swelling to be observed till some time after. The same observations are applicable to the swelling of tendons, and fasciæ.

As these swellings encrease by slow degrees, they show but little signs of inflammation. When they attack the periosteum, the swelling has all the appearance of a swelling of the bone, by being firm and closely connected with it.

The inflammation produced in these later stages of the disease can hardly get beyond the adhesive, in which state it continues getting worse and worse, and when matter is formed it is not true pus, but a slimy matter. This may arise in some degree from the nature of the parts not being in themselves easily made to suppurate; and when they do suppurate, the same languidness still continues, in so much that this matter is not capable of giving the extraneous stimulus, so as to excite true suppuration or ulceration, even after the constitution is cleared of the original cause, and then the disease is probably scrofulous. Some nodes either in the tendons, or bones, last for years before they form any matter at all; and in this case it is doubtful whether they are venereal or not, although commonly supposed to be so.

I have already observed, that the pain in the first stages of this disease is much less than might be expected, considering the effects produced by the poison. The disease being very slow and gradual in its progress, may account for its giving little pain; an ulcer in the throat causes no great pain, and the same may be said of blotches on the skin, even when they become large sores.

When the periosteum and bones become affected, the pain is sometimes very considerable, and at other times there is hardly any. It is not, perhaps, easy to account for this. We know also that the tendinous parts when inflamed give in some cases very considerable pain, and that of the heavy kind, while in others they will swell considerably without giving any pain.

These pains are commonly periodical, or have their exacerbations, being commonly worst in the night: this is common to other aches or pains, especially of the rheumatic kind, which the venereal pains resemble very much.

When the pain is the first symptom, it affords no distinguishing mark of the disease, it is therefore often taken for the rheumatism.

IV. OF THE EFFECTS OF THE POISON ON THE CONSTITUTION.

The poisonous matter simply as extraneous matter produces no change whatever upon the constitution, and whatever effects it has depend wholly upon its specific quality as a poison. The general effects of this poison on the constitution are similar to other irritations, either local or constitutional. It produces fever, which is of the slow kind; and when it continues a considerable time, it produces what is called a hectic disposition, which is no more than an habitual slow fever, arising from a cause the constitution cannot overcome. While this exists, it is impossible that any thing salutary can go on in such a constitution: the patient loses his appetite, or even if his appetite is good, loses his flesh, becomes restless, loses his sleep, and looks sallow.*

In the first stage of this disease, before it begins to show itself externally, the patient has generally rigors, hot fits, headachs, and all the symptoms of an approaching fever.

These symptoms continuing for some days, and often for weeks, show that there is some irritating cause which works slowly upon the constitution; it is then supposed to be whatever the invention or ingenuity of the practitioner shall call it; but the venereal eruptions, or nodes, upon either the periosteum, bones, tendons, or other parts, appearing, show the cause, and in some degree carry off the symptoms of fever, and relieve the constitution for a little time, but they soon recur.

These constitutional complaints, however, are not always to be found, the poison stimulating so slowly as hardly to affect the constitution, unless the poison is allowed to remain in it a long time.

There are many local appearances mentioned by authors which I never saw, such as the fissures about the anus, &c. Many diseases are

* This kind of look, although arising entirely from a harassed constitution, is always supposed to be peculiar to a venereal one: this idea, however, does not arise from the look only, but from the leading symptoms.

described as venereal; the cancer, scrofula, rheumatism, and gout, are considered as arising from it, which may be in some measure true. but they are with those authors the disease itself, and all their consequences, as consumption, wasting from want of nourishment, jaundice, and a thousand other diseases which happened many years before the existence of the lues venerea, are all attributed to it.

There is even at this day hardly any disease the practitioner is puzzled about, but the venereal comes immediately into his mind; and if this became the cause of careful investigation, it would be productive of good, but with many the idea alone satisfies the mind.

CHAPTER III.

GENERAL OBSERVATIONS ON THE CURE OF THE LUES VENEREA.

It has been observed before, that there are three forms of the venereal infection, gonorrhœa, chancre, and the lues venerea, which various forms I have endeavoured to account for. As they all three arise from the same poison, and as the two first depend only on a difference in the nature of the parts, and the lues venerea on another circumstance which has been explained, it would be natural to suppose that one medicine, whatever it is, would cure all the forms of this disease. But we find from experience, that this does not hold good; for one medicine, that is mercury, cures only the chancre and the lues venerea, and the gonorrhœa is not in the least affected by it; and what is still more remarkable is, that the two which it cures are in no respect similar, while the gonorrhœa, which it does not cure, is similar in some respects to the chancre, which it does cure.

It may be remarked in general, that there is not only a difference in the form of the disease, but also in the modes of cure, and in the times necessary for the cure of the different forms of the disease, even when the same medicine cures. The gonorrhœa in its cure is the most uncertain of the three, the chancre next, and the lues venerea the most certain, although cured by the same medicine which cures the chancre.

A gonorrhœa in some cases shall be cured in six days, and in others require as many months; which in regard to time is about the proportion of thirty to one. A chancre may be sometimes cured in two weeks, and often requires as many months; which is in the proportion of four to one. The lues venerea in general may be cured in one or two months; which is only two to one. This calculation shows the regularity and irregularity as to time in the cure of each form of the disease.

I have formerly observed, that indispositions of the body often affect this disease very considerably, more especially the gonorrhœa and the chancre.

When an increase of symptoms takes place in a gonorrhœa from an indisposition of body, nothing should be done for the gonorrhœa, the indisposition of body being only to be attended to; because we have no specific for the gonorrhœa, and in time it cures itself. But this practice is, perhaps, not to be followed in a chancre, or lues venerea. It may be necessary in those to continue the mercury, although, perhaps, more gently, for the mercury is a specific that cannot be dispensed with, because neither the chancre nor lues venerea get well of themselves, but always increase.

This form of the venereal disease I have divided into two stages. When in the parts most susceptible of the disease, which I have called the first order of parts, and which appear to be the superficies only; the lues venerea is, perhaps, subject to less variety than either the gonorrhœa or chancre, and its mode of cure is of course more uniform; although the disease be less easily ascertained, at least for some time. In the second order of parts the lues venerea becomes more complicated, and its cure still less to be depended upon.

The cure of this form is much more difficultly ascertained than either of the two former, they being always local, and their effects visible, become more the object of our senses, so that we are seldom or ever deceived in the cure; although at the same time the cure is often more tedious and difficult; for whenever the symptoms of the gonorrhœa or chancre have entirely disappeared, in general the patient may look upon himself as cured of them; but this is not the case in the lues venerea.

A lues venerea is the effects of the poison having circulated in the blood till it has irritated parts so as to give them a venereal disposition, which parts sooner or later assume the venereal action, according to the order of their susceptibility.

When the venereal matter is circulating, I have supposed that certain parts are irritated by it, and that a vast number of other parts escape, as is evidently the case with the chancres; for in the case of a chancre

the whole glans, prepuce, and skin of the penis, have had the matter applied to them, yet only one or more parts are contaminated or irritated by it, all the others escape; and we often see in the lues venerea, that, when the parts contaminated assume the action, it is confined to them without affecting other parts, although the disease be allowed to go on for a considerable time without any attempt to a cure; and also if these parts are perfectly cured the disease returns only in them; therefore these effects, although arising from the constitution, are in themselves entirely local, similar to the gonorrhœa and chancre, and like them may be cured locally; and the person may still continue to have the lues venerea, although not in these, yet in other parts, because there may be many other parts in the same body that are under the venereal disposition although they may not yet have assumed the venereal action. To cure the local and visible effects of the disease we must attack it through that medium by which it was communicated, that is, the blood, without however considering the blood itself as a diseased part, or containing the poison, but as the vehicle of our medicine which will be carried by it to every part of the body where the poison was carried, and in its course it will act upon the diseased solids. This practice must be continued some time after all symptoms have disappeared; for the venereal action may to appearance be stopped, and symptoms disappear, and yet all return again, the venereal action not being completely destroyed. If the medicine were also a cure for the disposition in the parts second in order, and could prevent their coming into action, it would be necessary to continue it somewhat longer on their account; but this is not the case; for the visible effects, symptoms, or appearances, in the first order of parts give way to the treatment, while the parts that have only acquired the disposition, and are still inactive, afterwards assume the action and continue the disease. This deceives the surgeon and leaves the ground-work for a second set of local effects in the parts second in order; but I have asserted that what will cure an action will not cure a disposition; if so we should push our medicine no further than the cure of the visible effects of the

poison, and allow whatever parts may be contaminated to come into action afterwards.

The parts that first assume the venereal action are easiest of cure; and I have suspected that those effects of the disease being external, were in some degree assisted in their cure by the local action of the medicine, which evidently passes off through those parts.

When the disease has attacked the parts second in order of susceptibility, it generally happens that they are more difficult of cure than the former; therefore when they appear at the same time with the former, and are cured, we may be sure that the first will be also cured. From hence as it would appear that the parts most susceptible of the disease are also easiest of cure, it follows, that the parts least susceptible of the disease are also most difficult of cure; and I believe that this is seldom or ever reversed, therefore those second in order of susceptibility have this advantage, that we have the local complaints for our guide to judge of the whole; and in such we have only to continue the treatment till they all vanish, being certain that the cure of the first, if there are any, will be involved in those of the second.

As the second are attended with more tumefaction or swelling than the first, it becomes a question, whether the mercurial course should be continued till the whole has subsided. But I believe it is not necessary to continue the method of cure till the whole tumefaction disappears; for as those local complaints cannot contaminate the constitution by reabsorption, and as the venereal disposition and action from the constitution can be cured while the local effects still remain, even where the tumefaction forming nodes on the bones, fasciæ, &c. is carried the length of suppuration, there can be no occasion for continuing the course longer than the destruction of the venereal action. But this effect of our medicine is not easily known, therefore it will be necessary to pursue the method of cure till the appearances become stationary, and probably a little longer, to destroy the whole action of the disease. From these circumstances it would appear that the venereal irritation when in this stage of the disease is easier of cure than the effects of that irritation, such as the tumefaction.

I. OF THE USE OF MERCURY IN THE CURE OF THE LUES VENEREA.

Mercury in the lues venerea, as in the chancre, is the great specific, and hardly any thing else is to be depended upon. It is necessary that we should always consider well the effects of this medicine, both on the constitution at large, and the disease for which it is given. The effects of mercury on a constitution will always be as the quantity of mercury in that constitution; and when the same quantity affects one constitution more than another, it is in the proportion of the irritability of that constitution, to the powers of mercury, entirely independent of any particular preparation, or any particular mode of giving it.

With regard to the preparations of the medicine, and the modes of applying it, we are to consider two things. First, the preparation and mode that is attended with the least trouble or inconvenience to the patient; and secondly, the preparation and mode of administering it that most readily conveys the necessary quantity into the constitution.

Nothing can shew more the unsettled mind of man, than his treatment of this medicine. If there is such a thing as a specific, mercury is one for the venereal disease in two of its forms; yet mankind are in pursuit of other specifics for the disease, as if specifics were more common than diseases; while at the same time they are too often contented with the common mode of treating many other diseases for which they have no specific; and these prejudices are supported by the public, who have in their minds a dread of this medicine, arising from the want of knowledge of our predecessors in administering it; and many of the present age, who are equally ignorant, take advantage of this weakness.

Mercury in the constitution acts on all parts of the machine, cures those which are diseased, affecting but little those that are sound. Mercury is carried into the constitution in the same way as other substances, either externally by the skin, or internally by the mouth: it cannot however in all cases be taken into the constitution in both ways; for sometimes it happens that the absorbents on the skin will not readily

receive it, at least no effect will be produced either on the disease or constitution from such application; when this is the case it is to be considered as a misfortune, for then it must be given internally by the mouth, although possibly this mode may be very improper in other respects, and often inconvenient. On the other hand, it sometimes happens that the internal absorbents will not take up this medicine, or at least no effect is produced either upon the disease or constitution; in such cases it is right to try all the different preparations of the medicine; for it will sometimes happen that one preparation will succeed when another will not. I have never seen a case where neither external nor internal applications of mercury were not absorbed; such a case must be miserable indeed.

I may just observe here, that many surfaces appear to absorb this medicine better than others; and most probably all internal surfaces and sores are of this kind; for when we find that thirty grains of calomel rubbed in on the skin have no more effect than three or four taken by the mouth, it becomes a kind of proof that the bowels absorb it best; also, when dressing a small sore with red precipitate produces a salivation, it shows that sores are good absorbing surfaces, especially too when we know that the lues venerea generally arises from a chancre.

A patient with a stump which produced too much granulations, was dressed with ointment containing a large proportion of red precipitate; the sore was about the size of a crown piece, it very nearly brought on a salivation, and the patient was obliged to leave it off.

A mulatto woman had upon her leg a very bad ulcer, which was about the breadth of two palms; it was dressed with red precipitate mixed with common ointment, which soon threw her into a violent salivation.

A lady, in the month of December 1782, was burnt over the whole breast, neck, and shoulders, as also between her shoulders, on which parts deep sloughs were formed. The sores at first healed nearly up, and tolerably well for burns; but they broke out anew and then became more obstinate. Seven months after the accident she came to

London, with very large sores extending across the breast, and upon each side to the shoulders; they were extremely tender and painful. They continued to heal for some time after she came to London; but she became ill, having been affected with extreme irritability, loss of appetite, sickness, and throwing up of her food and medicines. At this time the sores again began to spread, and became very large. After having been two months in town with little advantage, I tried warmer dressings, as basilicon to some parts, to see if any advantage would arise from such treatment, and it was found that these parts healed rather faster than the others; but the soreness was so great, even from the mildest dressings, that they could only be used in part. I next tried red pecipitate mixed with the ointment; and that it might increase the pain as little as possible, I ordered only ten grains to two ounces of the ointment. This appeared to agree better with the sores than the ointment alone; and we were happy in having found a dressing which both hastened on the cure, and was easier than the former. But about the fourth or fifth dressing from beginning the use of the precipitate, she began to complain of her gums; the next day began to spit, and by the seventh or eighth day the mouth was so sore, and the spitting so considerable, that upon considering the case we began to suspect that it might proceed from the red precipitate in the dressing. The gums, inside of the cheeks, and the breath, were truly mercurial. We immediately left off this dressing, except to a small corner, and had recourse to the former dressings. In a few days the effects of the mercury abated, and the sores looked more healthy than ever, and we again began to dress part of the sores with the ointment containing precipitate, which still agreed with them. When the mouth first became affected she had not used much above one half of the ointment; and by the time we had discovered the cause about three fourths of it had been expended in dressings, so that there were not quite ten grains of precipitate applied; and although this took up seven or eight days, and the ointment must have been soon removed from the sore by the discharge, yet a considerable spitting was produced, which lasted above a month. It is hardly to be conceived that above a grain or two could really be taken

into the constitution; for when we consider the particles of precipitate were covered with ointment, and a vast discharge of matter so as soon to remove this small quantity from the sore, we can hardly admit the possibility of more being absorbed; and if this idea of the quantity taken in is just, to what must we attribute the great susceptibility to the effects of the medicine? Was it the irritable state of the patient at the time? For the state of the constitution appeared to me to be that in which the locked jaw often takes place; and I often had this disease in my mind. The patient afterwards got well by the use of an ointment in which pitch was an ingredient.

A gentleman introduced a bougie into the urethra smeared with mercurial ointment, and rubbed a little on the frænum, three times, and his mouth became affected. All this tends to show that sores and internal surfaces absorb better than the skin.

Besides the practicability of getting the medicine into the constitution in either way, it is proper to consider the easiest for the patient, each mode having its convenience and inconvenience, which arises from the nature of the constitution of the parts to which it is applied, or from certain situations of life of the patient at the time; it is therefore proper to give it in that way which suits these circumstances best.

To explain this further, we find that in many patients the bowels can hardly bear mercury at all, therefore it is to be given in the mildest from possible; also joined with such other medicines as will lessen or correct its violent local effects, although not its specific ones on the constitution at large.

When it can be thrown into the constitution with propriety by the external method, it is preferable to the internal, because the skin is not nearly so essential to life as the stomach, and therefore is capable in itself of bearing much more than the stomach; it also affects the constitution much less; many courses of mercury which are absolutely necessary, would kill the patient if taken by the stomach, proving hurtful both to the stomach and intestines, even when given in any form, and joined with the greatest correctors: on the other hand, the way of life will often not allow it to be applied externally. It is not every one that can

find convenience to rub in mercury, therefore they must take it by the mouth if possible. To obviate the inconvenience often arising from the visible effects of mercury, many preparations have been invented; but any preparation of mercury producing an effect different from the simple effects of mercury in that constitution, such as sweating, or an increased discharge of urine, must be supposed either not to act as mercury, or the substance with which it is compounded produces this effect; but if its peculiar effects are less than usual, I should very much suspect that the mercury is acting in part as a compound, and not entirely as mercury.

Mercury, like many other medicines, has two effects, one upon the constitution and particular parts, which is according to its mode of irritation, independent of any disease whatever. The other is its specific effects upon a diseased action of the whole body, or of parts, whatever the disease be, and which effects are only known by the disease gradually disappearing. The first becomes an object of consideration for the surgeon, as it is in some measure by them he is to be guided in giving this medicine so as to have its specific effects sufficient for the cure of the disease.

In giving mercury in the venereal disease, the first attention should be to the quantity, and its visible effects in a given time; which, when brought to a proper pitch, are only to be kept up, and the decline of the disease to be watched; for by this we judge of the invisible or specific effects of the medicine, which will often inform us that some variation in the quantity may be necessary.

The visible effects of mercury are of two kinds, the one on the constitution, the other on some parts capable of secretion.

In the first it appears to produce universal irritability, making it more susceptible of all impressions; it quickens the pulse, also increases its hardness, producing a kind of temporary fever; but in many constitutions it exceeds this, acting as it were as a poison. In some it produces a kind of hectic fever, that is, a small quick pulse, loss of appetite, restlessness, want of sleep, and a sallow complexion, with a number of consequent symptoms; but by being a little accustomed to the use of

it, these constitutional effects commonly become less, of which the following cases are strong instances.

A gentleman rubbed in mercurial ointment for the reduction of two buboes. He had only rubbed in a few times, when it affected his constitution so much that it was necessary to leave it off. He was seized with feverish complaints of the hectic kind, a small quick pulse, debility, loss of appetite, no sleep, and night sweats. He took the bark with James's powder, and asses milk, and got gradually rid of these complaints. As the buboes were advancing, it was necessary to have recourse to mercury again; and I told him that now it would not produce the same effects so quickly, nor so violently as before. He rubbed in a considerable quantity without his constitution or mouth being affected, but the buboes suppurating, made me order it to be left off a second time, and when they were opened he had recourse to the ointment again for the third time, and without producing any disagreeable effects. The buboes took on a healing disposition for a while and then became stationary, showing that a new disposition was forming. He was directed to leave off the ointment and to bathe in the sea, which he did, and the buboes began to heal. In about three weeks however it was thought necessary to rub in again, and when he began, which was the fourth time, it had almost an immediate and violent effect upon his mouth; he left off again till his mouth became a little better, and then returned to the mercury a fifth time, and was able to go on with it.

A stout healthy man rubbed in mercurial ointment for a bubo till it affected his mouth; it further brought on very disagreeable constitutional complaints, such as loss of appetite, watchfulness, sallow complexion, lassitude from the least exercise, and swelled legs; and although various means were used to reconcile the constitution to it, yet it continued to act as a poison.

Mercury often produces pains like those of the rheumatism, and also nodes which are of a scrofulous nature; from thence it has been accused of affecting the bones, "lurking in them," as authors have expressed it.

Mercury often produces an itching of the skin, so much in some that they can hardly bear it.

Although mercury does not always affect the mouth yet it sometimes affects the constitution of the person, whose mouth can not be affected, producing loss of appetite, pains of the rheumatic kind, and all the constitutional symptoms of hectic fever; and at the same time shall be curing the venereal disease effectually.

A person had pains in his shoulders and blotches on the skin supposed to be venereal. He never could be affected with mercury. I made him rub in two drams of strong mercurial ointment every night, and when two ounces were rubbed in the blotches began to disappear. He then rubbed in three drams every night, and the symptoms entirely disappeared without any effects being produced by the mercury on the mouth, skin, or kidnies.

It may be supposed to be unnecessary to mention in the present state of our knowledge, that it never gets into the bones in the form of a metal, although this has been asserted by men of eminence and authority in the profession, and even the dissections of dead bodies have been brought in proof of it; but my experience in anatomy has not convinced me of the reality of such appearances. Those authors have been quoted by others; imaginary cases of disease have been increased; the credulous, and ignorant practitioner misled, and patients rendered miserable.

II. OF THE QUANTITY OF MERCURY NECESSARY TO BE GIVEN.

The quantity of mercury to be thrown into the constitution for the cure of any venereal complaint, must be proportioned to the violence of the disease. Two circumstances are however to be strictly attended to in the administration of this medicine; which are, the time in which any given quantity is to be thrown in, and the effects it has on some parts of the body, as the salivary glands, skin, or intestines. These two circumstances taken together are to guide us in the cure of the disease; for mercury may be thrown into the same constitution in very different quantities so as to produce the same ultimate effect, but the two very different quantities must be also in different times; for instance, one

ounce of mercurial ointment rubbed in in two days, will have more effect upon the constitution that two ounces rubbed in in ten; and to produce the same effect in the ten days, it may perhaps be necessary to rub in three ounces or more.

The effects on the constitution of one ounce rubbed in in two days are considerable, and also its effects upon the diseased parts; therefore a much less quantity in such a way will have greater effects; but if these effects are principally local, that is, upon the glands of the mouth, the constitution at large not being equally stimulated, the effect upon the diseased parts must also be less, which is to be determined by the local disease not giving way in proportion to the effects of the mercury on some particular part.

If it is given in very small quantities, and increased gradually so as to steal insensibly on the constitution, its visible effects are less, and it is hardly conceivable how much may at last be thrown in, without having any visible effect at all.*

These circumstances being known, it makes mercury a much more efficacious, manageable, and safe medicine, than formerly it was thought to be; but unluckily its visible effects upon some particular parts, such as the mouth, and the intestines, are sometimes much more violent than its general effect upon the constitution at large; therefore a certain degree of caution is necessary, not to stimulate these parts too quickly, as that will prevent the necessary quantity being given.

The constitution, or parts, are more susceptible of mercury at first than afterwards: if the mouth is made sore, and allowed to recover, a much greater quantity may be thrown in a second time, before the same soreness is produced; and indeed I have seen cases where it could not be produced from as much as possibly could be thrown in. Upon a renewal of the course of mercury, therefore, the same precautions are not necessary as at first. We are however every now and then deceived

* To give an idea of this, a gentleman had the mercury fall on his mouth upon rubbing in ten grains of the ointment a day, for ten days; the ointment was equal parts; but by leaving off and beginning anew, he at last rubbed in eighty grains every night for a month, without having his mouth, or any of the secretions visibly affected.

by this medicine, it being hardly possible to produce effects visible at one time; and afterwards the mouth, and intestines, shall all at once be affected.

Mercury when it falls on the mouth produces in many constitutions violent inflammation, which sometimes terminates in mortification. The constitutions in which this happens I suspect are of the erisypelatous kind, or what are called the putrid; therefore in such, greater caution is necessary. Mercury in general, that is, where it only produces its common effects, seldom or ever does any injury to the constitution. It should seem only to act for the time, and to leave the constisution in an healthy state. But this is not always the case, for probably mercury can be made to affect every constitution very materially, being capable of producing local diseases, as has been mentioned; and also capable of retarding the cure of chancres, buboes, and certain effects of the lues venerea, after the poison has been destroyed.

III. OF THE SENSIBLE EFFECTS OF MERCURY UPON PARTS.

The sensible effects of mercury are generally an encrease of some of the secretions, a swelling in the salivary glands, and encrease of saliva; an encrease of the secretion of the bowels, which produces purging, and an encrease of the secretion of the skin, producing sweat, also often an encrease of the secretion of urine. Sometimes one of these secretions only is affected, sometimes more, and sometimes all of them together. But the effects upon the mouth are the most frequent.

Mercury often produces headachs, and also costiveness, when its action on other parts becomes sensible, especially upon the glands of the mouth.

When the mercury falls upon the mouth, it does not affect all parts of it equally, sometimes attacking the gums, at other times the cheeks, which become thickened, and ulcerate, while the gums are not in the least affected, as appears by the patient being capable of biting any thing hard.

Mercury, when it falls upon the mouth, and parts belonging to the

mouth, not only encreases the discharge of those parts, but it brings on great tumefaction, which is not of the true inflammatory kind where coagulable lymph is thrown out, but rather resembling erisypelatous tumefaction. The tongue, cheeks, and gums swell, and the teeth become loose; all which is in proportion to the quantity of mercury given, and susceptibility of the parts for such irritation. It produces great weakness in the parts, in which ulceration easily takes place, especially if they are in the least irritated, which is often done by the teeth, and even mortification sometimes ensues. How far it produces similar effects when it falls on other parts, I do not know. The saliva in such cases is generally ropy, as if principally from the glands affected. The breath acquires a particular smell.

A person could not have mercury applied externally without its occasioning violent inflammation. He could take ten or twelve grains of the mercurius calcinatus every day without affecting his bowels or mouth, but it affected his head, so that he could hardly walk; and, to use his own expression, he did not know "whether his head was off or on."

As mercury generally produces evacuations, it was naturally imagined that it was by this means it effected a cure of the venereal disease; but experience has taught us, that in curing the venereal disease by this medicine, evacuations of any kind produced by it are not at all necessary; and this might have been supposed, as similar evacuations produced by other medicines are of no service, therefore it was reasonable to imagine that these evacuations when produced by mercury, were also of no service; except we could suppose that the evacuation produced by the mercury was not the same with that produced by other medicines, but that it was a specific evacuation; that is to say, a discharge carrying off the venereal poison by its union with the mercury; and therefore the faster the mercury went off, the sooner would the poison be carried out of the constitution. But this is not found to be the case in practice; on the contrary, evacuations produced by the medicine retard the cure, especially if the secretory organs are too susceptible of this stimulus; for then the quantity which is necessary, or sufficient for the cure of the

disease cannot be taken in, the effects of the medicine upon particular parts being greater than the patient can bear; and the quantity of mercury to be thrown into the constitution must be limited, and regulated according to the quantity of evacuation, and not according to the extent of the disease. On the other hand, if it is given with care, so as to avoid violent evacuation, any quantity may be thrown in sufficient for the cure of the disease.

Certain evacuations may be supposed to be a mark of the constitutional effects of mercury, but they are not to be entirely depended upon, the secretions being only a proof of the susceptibility of some parts to such a stimulus; however it is probable that, in general, they form a good criterion of its constitutional effects. Some have gone so far as to suppose that quantity of mercury alone, without any sensible effects, is sufficient for the cure of the disease; and this is in some degree the case, but not completely so, for we have no good proof of its affecting the constitution but by producing an increase of some of the secretions.

IV. OF THE ACTION OF MERCURY.

Mercury can have but two modes of action, one upon the poison, the other on the constitution: we can hardly suppose it to act both ways. If mercury acted upon the poison only, it might be supposed to be in two ways, either by destroying its qualities by decomposing it, or by attracting it and carrying it out of the constitution. If the first were the action of mercury, then we might reasonably suppose that quantity alone would be the thing to be depended upon; if the second, that the quantity of evacuation would be the principal circumstance.

But if it act upon the principle of destroying the diseased action of the living parts, counteracting the venereal irritation by producing another of a different kind, then neither quantity alone nor evacuation will avail much; but it will be quantity, joined with sensible effects, that will produce the quickest cure, which from experience we find to be the case. But although the effects that mercury has upon the venereal disease are in some degree in proportion to its local effects on some of

glands, or particular part of the body, as the mouth, skin, kidneys, and intestines, yet it is not exactly in this proportion, as has been mentioned. When mercury disagrees as it were constitutionally, producing great irritability and hectic symptoms, this action or irritation is not a counter irritation to the venereal disease, but is a constitutional irritation, having no effect on the disease, which continues to increase. Mercury losing its effects upon the disease by use, is a proof that it neither acts chymically, nor by carrying off the poison by evacuation, but by its stimulating power.

The effects will always be in proportion to the quantity in a given time, joined with the susceptibility of the constitution to the mercurial irritation. These circumstances require the minutest attention; and in order to procure its greatest action with safety, and to procure this in the most effectual way, it must be given till it produces local effects somewhere, but not too quickly, that we may be able to throw in a proper quantity; for local effects produced too quickly, prevent the sufficient quantity being thrown in for counteracting the venereal irritation at large. I have seen cases where the mercury very readily acted locally, and yet the constitution was hardly affected by it, for the disease did not give way.

A gentleman had a chancre which he destroyed with caustic, and dressed the sore with mercurial ointment. He had also a small uneasiness in one of his groins, which went no further, but which showed an absorption of the poison. The chancre soon healed, and he rubbed in about two ounces of mercurial ointment. He began this course with small quantities, that is, a scruple at each rubbing, and increased it; however, it soon affected his mouth, and he spit for about a month. Two months after he had a venereal ulcer in one of his tonsils. Here was a considerable sensible effect from a small quantity of mercury, which proved ineffectual, because its specific effects, as I apprehend, were not in proportion to its sensible effects; the salivary glands being too susceptible of the mercurial irritation.

On the other hand, I have seen cases where quantity did not answer till it was given so quickly as to affect the constitution in such a manner

as to produce local irritation, and, consequently, sensible evacuations; which is a proof that the local effects are often the sign of its specific effects on the constitution at large, and shows the susceptibility of the diseased parts to be affected by the medicine is in proportion to the effects of it upon the mouth. Its effects are not to be imputed to evacuation, but to its irritation; therefore mercury should be given, if possible, so as to produce sensible effects upon some parts of the body, and in the largest quantity that can be given to produce these effects within certain bounds; and that these sensible effects should be the means of determining how far the medicine may be pushed, in order to have its best effects upon the disease without endangering the constitution. The practice here must vary according to circumstances; if the disease is in a violent degree, less regard must be had to the constitution, and the mercury is to be thrown in in larger quantities; but if the disease be mild, it is not necessary to go beyond that rule, although it is better to keep up to it, on purpose to cure the disease the sooner.

If the disease is in the first order of parts, a less quantity of mercury is necessary than if it were in the second order of parts, and had been of long standing, with its first appearances only cured, and the venereal disposition still remaining in the secondary parts. To cure the disease, whether in the form of chancre, bubo, or lues venerea, probably the same quantity of mercury is necessary; for one sore requires as much mercury as fifty sores in the same person, and a small sore as much as a large one; the only difference, if there is any, must depend upon the nature of the parts affected, whether naturally active or indolent. If there be any material difference between the recent and constitutional, which I apprehend there is, it may make a difference in the quantity. I do conceive that the recent are upon the whole more difficult to cure; at least they commonly require longer time, although not always.

Having thus far premised these general rules and observations, I shall now give the different methods of administering mercury.

V. OF THE DIFFERENT METHODS OF GIVING MERCURY EXTERNALLY—INTERNALLY.

Previous to the giving of mercury, it is very proper to understand as much as possible the constitution of the patient with regard to this medicine, which can only be known in those who have already gone through a mercurial course; but as many of our patients are obliged to undergo this treatment more than once, it becomes no vague inquiry; for as there are many who can bear this medicine much better than others, is is very proper that this should be known, as it will be a direction for our present practice. I think that few constitutions alter in this disposition; although I knew one case, which admitted of a considerable quantity at one time without being visibly affected; but about a twelvemonth after was affected with a very little.

When mercury is giving to cure the lues venerea, whatever length we mean to go in the sensible effects of it, we should get to that length if possible, and we should keep up to it. For we shall find it difficult to bring its effects to that standard again if we allow it to get below it. If the mercury should get beyond what we intended, we should be very much upon our guard in lowering it; and should probably begin to give it again before its effects are reduced to the intended standard: for the same quantity now will not operate so powerfully as before: insomuch that what at first produced greater effects than was intended, will not be sufficient afterwards.

Mercury is best applied externally in form of an ointment. Unctuous substances keep it divided, attach it to surfaces, and do not dry; it may also be supposed that it becomes a vehicle for the mercury, and carries it through the absorbents to the general circulation; for it is probable that oil is as easy of absorption as watery substances.

If the symptoms are mild in the first order of parts, and the patient not accustomed to mercury, or it is known that he cannot bear the medicine in great quantity, and it is intended to conduct the cure by almost insensible means, it is proper to begin with small quantities. One

scruple, or half a dram, of an ointment made of equal parts of quicksilver and hogs lard, rubbed in every night for four or six nights, will be sufficient to begin with. If the mouth is not affected the quantity may be gradually increased till two or three drams are rubbed in at each time; but if the first quantity has affected the mouth we may be almost certain that the glands of the mouth are very susceptible of the mercurial stimulus; therefore it will be proper to wait two or three days till that effect begins to go off.

When we begin the second time the quantity may be gradually increased, at least a scruple every time, till two drams or more is rubbed in each night, which may be done without affecting the patient very considerably a second time, as has been already observed.

If all the symptoms gradually disappear, there is no more to be done but to continue this practice for a fortnight longer by way of security.

This method steadily pursued will cure most recent cases of lues venerea; but it is not sufficient if the disease has been merely kept under by slight courses of mercury; a greater quantity becomes necessary, from a kind of habit the constitution has acquired, by which it is rendered less susceptible of the mercurial stimulus.

If the disease should return in the second order of parts, we may be certain the same quantity of mercury will not be sufficient to cure them, their action being slow under the venereal irritation, therefore require more than what had been first given.

I may be allowed to remark, that where the venereal symptoms have been ulcers in the mouth or throat, I have suspected that the mercury being brought to the mouth, and the saliva being impregnated with it, and acting as a mercurial gargle, cured those parts locally; and that the constitution has remained still tainted; the mercurial action in it having been much inferior to what it was in the mouth. Perhaps something similar may take place in eruptions of the skin where the mercury passes off by sweat; for we know that sulphur will cure the itch by passing off in perspiration. If these are facts, then it may in some degree account for the local symptoms in the first order of parts being easier of cure than those in the second.

After venereal blotches on the skin have been removed by mercury, they sometimes recur afterwards, which has led many to have recourse to mercury again, but the proper practice is to desist some time to see what becomes of them, as they often disappear again spontaneously; but as in some they may be a recurrence of the disease, in such mercury must be given.

The manner of living under a mercurial course need not be altered from the common, because mercury has no action upon the disease which is more favoured by one way of life than another. Let me ask any one what effect eating a hearty dinner, and drinking a bottle of wine, can have over the action of mercury upon a venereal sore?

I own, however, that I can conceive cold affecting the operations of mercury upon the venereal disease; it is possible that cold may be favourable to the venereal irritation, and therefore contrary to that produced by mercury; and there is some show of reason for supposing this; for I have before asserted that cold was an encourager of the venereal irritation; and therefore keeping the patient warm may diminish the powers of the disease while under the cure.

Mercury given internally is in many cases sufficient. It is the most convenient way of giving this medicine, for many will swallow a pill, who do not choose to rub the body with the ointment; indeed there are many circumstances in life which make this mode of introducing it into the constitution the most convenient; but on the other hand, there are many constitutions that cannot bear mercury given internally; when these two circumstances meet in the same patient it is unfortunate.

Mercury taken internally often produces very disagreeable effects upon the stomach and intestines, causing sickness in the one and griping and purging in the other.

If it be found necessary to give it internally, and it disagree either with the stomach or intestines, or both, even the most simple preparation, its effects, whatever they are, must be corrected or prevented, by joining with the mercury other medicines. If it affect the stomach only, the mercury many be joined with small quantities of the essential

oils, as the essential oil of cloves, or camomile flowers, which will in many cases take off that effect. If it both disagree with the stomach and bowels, which I believe arises either from the mercury meeting with an acid in the stomach by which part of it is disolved forming a salt, or from being given in the form of a salt, both of which will generally purge and become the cause of their own expulsion. There are two ways of obviating these effects; the first is, by preventing the salt from forming; the second, by mitigating its effects on the intestines if formed, by taking off their irritability. To prevent the salt from forming, the best way is to join the mercury with alkaline substances, either salts, or earths: and when given in a saline state, it may be joined with opium, or some of the essential oils.

To prevent the formation of the salt, take of the preparations of mercury, such as mercurius calcinatus, mercurius fuscus, or calomel, forming them into pills with the addition of a small quantity of soft soap, or any of the alkaline salts; the alkaline salt also prevents the pill from drying: or, instead of these, a calcareous earth may be joined with the mercury, such as chalk or crabs eyes: upon this principle is the mercurius alkalizatus, which is crude mercury rubbed down with crabs eyes. But these substances add considerably to the bulk of the medicine, no less than twenty grains being necessary for a dose; which contains seven grains and a half of crude mercury. The mercurius calcinatus rubbed with a small proportion of opium makes an efficacious pill, and in general agrees well both with the stomach, and bowels.

Opium has been long joined with mercury to cure the venereal disease. By some as much has been attributed to the opium as the mercury; however, opium should be given with care, for it is not every constitution with which it agrees, often producing irritability, in some lassitude and debility, in others spasms.

If the mercury is not given in the above manner, but in the form of a salt, or the salts are allowed to form, then it should be joined with one third of opium, and a drop of the oil cloves, or camomile, which will make it agree with the stomach, and prevent its purging; or if it is found still to disagree both with the stomach, and bowels, it may be

compounded still further, by joining with the mercury the alkaline salts, the opium, and some essential oil.

A grain of mercurius calcinatus made into a pill, with the addition of such medicines as the stomach or bowels may require, may be given every night for a week; and if in that time it has not affected the mouth it may be repeated evening and morning; and after the patient has been accustomed to the medicine, and it is found not to fall much upon the mouth, it may be increased to two grains in the evening, and one in the morning.

The same directions hold equally good either with the mercurius fuscus, or calomel; but it requires more of these last preparations of mercury to have the same medicinal effect upon the disease, than of the before mentioned; perhaps the proportion of their effects are about two, or three, to one. Why this should be the case is probably not easily accounted for, the quantity of mercury being very nearly the same in a given weight in both, for in eight grains of calomel there are seven grains of crude mercury. Three grains of these preparations appear only equal to one of the mercurius calcinatus. The crude mercury given in the same quantities with either of the former appears the least efficacious of all, for fifteen grains of crude mercury rubbed down with any mucilage, seems only equal to one or two of the mercurius calcinatus.

The corrosive sublimate, which is a salt capable of stimulating violently, is generally given in solution in water, brandy, or some of the simple waters, and has been used with the appearance of considerable success. It would appear that it removes ulcers in the mouth as soon, if not sooner than any of the other preparations; but this I suspect arises from its application to these parts in its passage to the stomach, acting upon them locally as a gargle; however, from experience it appears not to have sufficient powers over the venereal irritation; in recent cases only removing the visible local effects, without entirely destroying the venereal action; for many more have been found to relapse after having taken this preparation, than from many of the others; which is owing to its passing very readily off by the skin. Besides, it

disagrees much more with the stomach, and intestines, than any of the other preparations.

A grain of this medicine dissolved in about an ounce of some fluid, is generally the dose, and increased according as it agrees with the bowels, and according to its effects upon the mouth, and disease.

As corrosive sublimate contains an acid, and as you must be guided by the effects of the acid on the bowels, the quantity of mercury you can give in this form is necessarily smaller than in the other preparations. Ward's drop containing less acid can be given in larger quantity, and is more efficacious on that account. Perhaps any of these preparations united with a scruple of gum guaiacum may have more effect than when given alone; an electuary is a convenient form.

This practice continued for two months will in general cure a common lues venerea; but here it is not meant that any time should be specified. After all the symptoms of the disease have disappeared, this course should be continued at least a fortnight longer; but if the symptoms disappear very suddenly, as they often do, perhaps within eight or ten days, probably from the medicine going off by those surfaces where the disease appears, the medicine should be continued three weeks, or perhaps a month longer, and the dose increased. In such cases the visible local effects appear to be cured, while a venereal disposition remains in the parts.

Various are the preparations of mercury recommended for internal use, while practitioners have generally been satisfied with but one for external application. Every practitioner finds some one of the preparations answering to better appearance in some one case than another, which casts the balance in favour of that medicine in his mind; or others finding the bad effects of a particular preparation at some one time, have generally condemned that preparation; not to mention that deceit is often practised in the cure of this disease. One would naturally suppose that the simplest preparation in the best, that which is easiest dissolved in the animal juices, does least michief to the stomach, or general health, and is least disturbed or hindered in its operations; for we can hardly suppose that any substance joined with mercury which

alters either its chymical or mechanical properties out of the body, can add to its power in the body, except a substance which had a similar power when acting alone.

VI. OF THE CURE OF THE DISEASE IN THE SECOND OR THIRD STAGE.

In the more advanced stages of the disease the mercurial course must be pushed further. The greatest quantity of that medicine, that the patient can bear at a time, is to be thrown in, and continued with steadiness till there is great reason to suppose the disease is destroyed. It will not be possible in such cases to prevent the mouth from being considerably affected, the quantity of mercury necessary to be thrown in for the cure of these stages of the disease being such as will in mosst cases produce that effect.

Before the disease has advanced so far, the patient most probably has taken mercury, and it is proper to inquire how he has been affected by it, and what quantity of it he could bear, which will in some degree direct us in the quantity now to be begun with. If the patient has not taken mercury for a considerable time, and is easily affected by it, which is the case that admits of the least quantity, it will be necessary to begin cautiously, regulating the quantity according to circumstances; but if the person has taken mercury lately, although easily affected by it, more freedom may be used on returning to it, because it will have less power on his mouth, as also on the disease; again, if the person has been taking mercury very lately, and is with difficulty affected by it, which is the case that admits of the greatest quantity, then it may be administered freely, so as to affect the constitution in the proper time. If the mercury is brought to the mouth in six or eight days, and a considerable soreness is produced in twelve, it will in general be a good beginning. In such cases the constitution is, if possible, to be surprized by the medicine so as to produce its greatest effects, but with such caution as to be able to keep up these effects by quantity.

Friction will answer better than giving it internally; for in this way

we are surer of throwing in a larger quantity in a given time than could be taken internally without hurting the stomach.

The quantity of mercury applied in this way should be, under certain circumstances, in proportion to the surface on which it is applied, and the surface should be completely covered with the ointment; for half an ounce of mercurial ointment rubbed in upon a given surface, will have nearly the same effect as one ounce rubbed in on the same surface; therefore, one ounce, to have double the effect, should have double the surface. The quantity of ointment must therefore be adapted to the quantity of surface; for on a certain extent of surface no more than a determined quantity of ointment can be applied so as to be absorbed; and applying a greater quantity would be useless; and if the quantity of surface is greater, the same portion of ointment cannot be diffused so as to employ fully all the absorbents. Every surface which is used may therefore have its full quantity of ointment, but certainly should not have more, if we are to attribute the effects of the mercury to the quantity.

It has most probably been always the practice to rub the mercury well in, as it is termed; but I suspect that this arose rather from an idea of the surface being porous like a sponge, than of absorption being performed by the action of vessels; and it is probable that this action in the vessels producing absorption, may be rather disturbed than excited by friction.

How long the course is to be followed is not to be exactly ascertained, it may be thought proper to continue it till the local appearances, as nodes, have subsided; but I suspect that this is hardly necessary, except they give way readily; for in such cases the local complaints, or tumefaction, &c. generally require a longer time to be removed than the venereal action; and local applications must be of service, especially if such tumefactions are obstinate.

The manner of living under such a severe course, which is, in every respect, weakening, is to be particularly attended to; the patient must be supported; and the local effects of the medicine in the mouth preventing his taking many kinds of nourishment, especially such as are of a

solid form; fluids must form his only nourishment, and these should be such as will become solid after they are swallowed; milk is of this kind, An egg beat up with a little sugar, and a little wine; sago, saloop, &c. form a proper diet. In many cases wine and bark must be given through the whole course. Sugar is perhaps one of the best restoratives of any kind we are acquainted with, when a constitution has been very much debilitated by long fasting, from whatever cause, whether from the want of food when in health, or in the time of disease, or where the food has not been allowed to answer the constitutional waste, as in a course of mercury, and when the disease or course of mercury is gone, then sugar will restore such constitution probably better than any thing else.

Although it is not a common opinion, and therefore not a common practice, to give sugar entirely with this view, yet there are sufficient proofs of its nutritive quality over almost every other substance. It is a well known fact, that all the negroes in the sugar islands become extremely lusty and fat in the sugar-cane season; and they hardly live upon any thing else. The horses and cattle that are allowed to feed upon the sugar cane all become fat. The hair of the horse becomes fine. Birds who feed upon fruit never eat it till it become very ripe, when it has formed the greatest quantity of sugar, and even then only on such as furnish the largest quantity of sugar. Insects the same; but in this tribe we cannot have a stronger instance of this fact than in the bee. Honey is composed of sugar, with some other juices of the plant, with a little essential oil; but sugar is the principal ingredient. When we consider that a swarm of bees will live a whole winter on a few pounds of honey, keep up a constant heat about ninety-five or ninety-six degrees, and the actions of the animal œconomy equal to that heat, we must allow that sugar contains perhaps more real nourishment than any other known substance.

We see too that whey is extremely fattening, which is the watery part of the milk, containing neither the oil nor the coagulable matter; this arises principally from the sugar it contains; for being composed of the watery part it holds all the sugar of the milk in solution. If the

milk is allowed to become sour it is not so fattening, because it is the sugar which is become sour.

Although the nutritive qualities of sugar have not been so generally known as to introduce it into universal practice, yet they have not entirely escaped the notice of practitioners. Mr. Vaux, from observing the negroes in the West Indies growing fat in the sugar season, has been induced to give it in very large quantities to many of his patients, and with very good effects. Honey is perhaps as good a mode of taking this substance as any: sweetening every thing that is either eat or drunk, whether by sugar in honey, or sugar alone, is probably immaterial; yet it is probable that the other ingredients in honey may add to its nutritive quality.

VII. OF LOCAL TREATMENT.

If the local effects have gone no further than inflammation and swelling, either of the soft or hard parts, most probably no local treatment will be necessary, for the treatment of the constitution will in general remove them entirely.

It sometimes however happens that the local complaints will not give way, but the parts remain swelled in an indolent and inactive state, even after there is every reason for supposing the constitution is perfectly cured. In such cases the constitutional treatment is to be assisted by local applications of mercury to the part, either in the form of a plaister or ointment. The latter is by much the best mode. If these are not sufficient, as often happens, we must endeavour to destroy this disposition by producing an inflammation of another kind. I have seen a venereal node which gave excruciating pain cured by an incision only being made down to the bone the whole length of the node; the pain has ceased, the swelling has decreased, and the sore healed up kindly without taking a grain of mercury. Blisters have been applied to nodes with success; they have removed the pains and diminished the swellings; so far furnishing a proof that local treatment may assist mercury in many cases.

This treatment has not only been used to assist mercury in those cases where the medicine did not appear to be equal to the disease, but it has been used at the commencement of the cure, and even before mercury had been applied; but it was still thought necessary to go through the same mercurial course as if nothing had been done to the local complaints.

It may be asked, what advantage arises from the incision or application of the blister? The advantage is immediate relief from violent pains; and as there are two powers acting, it is natural to suppose the cure will be more speedy.

After all the above trials it may happen that the local effects shall still remain, forming as it were a new disease, which mercury may increase, and therefore other methods of cure may be tried, as will be described hereafter.

VIII. OF ABSCESSES—EXFOLIATION.

When an abscess forms in a node in the periosteum, the bones are generally affected and make part of the abscess. Great attention should be paid to them, for suppurations in them are not like suppurations in common abscesses, they are seldom produced from the true suppurative inflammation, and therefore are slow in their progress, rarely producing true matter, but a mucus, something resembling slime, which lies flat upon the bone. This circumstance makes it difficult to determine when suppuration has taken place, and in many cases to detect matter, even where it is formed. Another circumstance which renders the presence of matter in such cases doubtful is, that the progress of the disease is generally checked very early by the use of mercury. This matter is often reabsorbed during a mercurial course; and it is proper, particularly in an early state of the complaint, to give it this chance; but if the absorption does not take place, and the complaint is in an advanced state, it must be opened.

The surgical treatment of the parts under such circumstance is the same as in other diseases of these parts; opening with great freedom is

absolutely necessary; for the more parts are exposed, the more inclinable they are in general to take on the healing state, and still more so here; for violence assists in destroying the venereal disposition. No skin covering a bone should be removed from an abscess, especially in the lower extremities.

If the abscess is opened freely, and an exfoliation takes place, which is generally the case, it is to be treated as any other exfoliation. Exfoliations succeed much better here than in many other cases, because the disease from which they proceed can generally be connected, which is not the case in many diseases of bones where exfoliation takes place. Cases however sometimes occur in which after the venereal disposition has been corrected another diseased action takes place in the bone, the nature of which will be explained when upon the effects remaining after the disease is cured, and the diseases sometime produced by the cure.

IX. OF NODES ON TENDONS, LIGAMENTS, AND FASCIÆ.

The observations made on the nodes of the periosteum and bones are applicable to swellings and suppurations of the ligaments and fasciæ; but it is still more difficult to ascertain the presence of matter in them than in the former.

When a thickening only of the ligaments or fasciæ is the consequence of the disease, it is very obstinate, as in many cases the diseased part may be cleared of all venereal taint and still the swellings remain. Blisters may often be applied here with success; but if they fail, then it will be absolutely necessary to make an incision into the part, to excite a more vigorous action; for although the complaint has nothing venereal in it, nor is any contamination to be feared from it in future, yet as it leaves often very obstinate and disagreeable swellings, which neither give way to medicine nor time, it is proper to use every means for their removal.

X. OF CORRECTING SOME OF THE EFFECTS OF MERCURY.

Formerly when the management of mercury was not so well understood, nor its effects in this disease so well known as they are at present, it was generally suppossed to act by evacuation from the salivary glands, and was therefore always given till that evacuation took place; and as its effects in the cure were imagined to be in proportion to the quantity of this evacuation, it was pushed as far as possible without endangering suffocation. From this treatment it often happened in those constitutions which were susceptible of the mercurial irritation, and in which the medicine produced much more violent effects on some particular secretions than could be wished, that recourse was obliged to be had to medicines correcting the effects of mercury; as these effects were often an hindrance to its being in sufficient quantities for the cure of the disease.

I mentioned, when treating of the effects of mercury, that the sensible increase of the secretions produced by it were in the following order; first of saliva, then sweat, then urine and often of the mucus of intestines, producing purging; I also observed that when any of those secretions became too violent, that the hand of the surgeon was tied up till they were moderated. Attempts have been made to lessen those effects in two ways, either by the destruction of its power on the body in general, or by its removal; but neither of these means have succeeded. It never has once been thought necessary to attempt to lessen its powers on the organs of secretion, so as still to retain the same quantity in the constitution, or even to throw in more, which if it could be effected, would be sometimes of great service; but as we are not yet acquainted with powers sufficient for these purposes, we are obliged to observe great caution in our mode of giving the medicine.

I have endeavoured to show that this medicine need not be given with a view to procure those evacuations, and that it may be given in any qauntity without increasing either of those secretions in any evident degree; however, after every precaution we may be still deceived, and the

medicine will every now and then produce greater effects than were intended. It is very necessary therefore to seek for a preventive of the effects of mercury, when likely to be too violent, or to remedy those effects when they have already taken place.

The common practice when mercury produced violent effects upon the intestines, was to counteract these effects; but this was not done with a view to retain the mercury in the constitution, but to relieve the bowels that were suffering by the action of the medicine: whereas the proper practice would be to stop its progress here, as in every other outlet, that more mercury may be retained in the constitution.

Although these increased secretions arise from the constitution's being loaded with mercury, yet there is no danger in stopping them, for they do not arise from an universal disposition becoming a local, or critical one; and therefore if such an action be checked or stopped in one place, it must necessarily fall upon some other; but it is from the part being more susceptible of this irritation than any other, and the quantity now in the constitution being equal to the susceptibility of the part; and therefore though its effects are stopped here, it does not break out any where else, every other part being capable of supporting this quantity, and of remaining unaffected till more is thrown in.

When the mercury attacked the salivary glands it increased their secretion so much as in some cases to oblige practitioners to administer such medicines as were thought likely to remove this new complaint. This susceptibility of the glands of the mouth, and the mouth in general, to be easily put into action by this medicine, was generally suppose to arise from a scorbutic constitution, to which most complaints of the mouth are attributed. I am of opinion that scrofulous people, and those of a lax and delicate habit, are more subject to have it fall on the mouth than those of a contrary temperament.

Purges were given upon a supposition that mercury could be carried off by the evacuation produced by them, and they were repeated according to the violence of the effects of the medicine, and the strength of the patient: but I can hardly say that I ever have seen the effects of mercury upon the mouth, lessened by purging, whether it arose spon-

taneously, was produced by purging medicines, or even when arising from the mercury itself. As this method was not found sufficient for the removal of the complaint other medicines were tried; sulphur was supposed to be a specific for the removal of the effect of mercury. Whether this idea arose from practice or reasoning is not material;* but I think I have seen good effects from it in some cases. If we can suppose purging of any service, purging with sulphur would answer best, as it would exert its effects both as a purge and as a specific.

Sulphur certainly enters the circulation as sulphur, because our sweat and urine smell of it; if it does not combine with the mercury and destroy its properties as mercury, it is possible, agreeable to the opinion of those who first thought of giving it with this intention, that it may so combine as to form Æthiop's mineral, or something similar, for we know that the Æthiop's mineral however formed does not in general salivate. It is possible too, that sulphur may act as a contrary stimulus to mercury, by counteracting the effects of it in the constitution. Sulphur has even been supposed to hinder the mercury from entering the circulation. Upon the whole, as these preparations of sulphur and mercury are still supposed to have good effects, and as I think I have seen good effects in other cases, we must either allow that they enter the circulation, or that their whole effects are on the stomach and intestines, with which the rest of the body sympathises. The good effects from sulphur in lessening or altering the immediate effects of mercury, can only take place when that medicine is really in the constitution; therefore a distinction is to be made between such as arise immediately from mercury, and one continued from habit after the mercury has been evacuated from the constitution, a case that sometimes happens, and which will be taken notice of in its proper place.

The taste in the mouth from the use of mercury has been known to go off, and not to be perceived for a fortnight, and the same taste has

* Sulphur united with any of the metals probably destroys their solubility in the juices, or at least their effects in the circulation; none of the cinnabars act either as sulphur, or mercury. Crude antimony, which is regulus of antimony and sulphur, has no effect. Arsenic when joined with sulphur has no effect, nor has iron.

recurred: this I am informed has happened twice to one gentleman from the first quantity of mercury taken. To account for this is not easy: in whatever way it happens it is a curious fact.

When the mercury has fallen upon the mouth and throat, washing those parts with opium has often good effects, for opium takes off irritability, and of course the soreness, which is one means of lessening the secretion. A dram of tinctura thebaica to an ounce of water makes a good wash, or gargle.*

When the mercury falls upon the skin, it is neither so disagreeable nor so dangerous as when it falls upon the mouth: however, it may often happen that it will be proper to check such a discharge, both upon account of its being troublesome, and of its lessening the effects of the medicine in the constitution by carrying it off. The bark is perhaps one of the best correctors of this increased secretion.

When the medicine attacks the kidneys and increases the secretion of these glands, it is not so troublesome as when it produces sweating, though it is possible that it may carry off the mercury too soon; but as we have but few medicines that can lessen that secretion, in most cases it must be allowed to go on. The bark may in such cases be given with advantage.

When the mercury falls upon the bowels, it proves often more dangerous and troublesome than in any of the former cases, especially the two last; but it is perhaps most in our power to prevent or palliate. Opium should be given in such quantities as to overcome the complaint, and I believe will seldom fail in removing all the symptoms.

* My using opium in this way was from analogy, finding that opium quieted the bowels when a purging come on in consequence of mercury: I tried it by way of gargle to the mouth, and found good effects from it, but not equal to those which it produced in the bowels.

XI. OF THE FORM OF THE DIFFERENT PREPARATIONS OF MERCURY WHEN IN THE CIRCULATION.

It would appear from reason, and many circumstances, that mercury must be in a state of solution in the juices of the body before it can act upon the venereal disease, and indeed before it can act upon any other disease. That mercury is in a state of solution in our juices, and not in the state of any preparation of mercury that we know of, is very probable from the following facts.

First, crude mercury, every salt of mercury, and calx of mercury, is soluble in the spittle, when taken into the mouth, by which means it is rendered sensible to the taste: from thence it must appear that it is capable of solution in some of our juices.

Secondly, crude mercury, when divided into small parts by gum arabic, &c. so as to be easier of solution when taken into the stomach, generally purges; but crude mercury taken without such division has no such powers, not being so readily dissolved in the juices of the stomach. The simple calx of mercury has the same effects, purging, and much more violently from being, I suppose, readier of solution in the animal juices; for if it only purged from its union with the acid which happened to be in the stomach, it most probably would not purge more than crude mercury; although it is very probable that the calx is easier of solution in a weak acid, than even the crude mercury.

Thirdly, every preparation of mercury producing the same effect in the mouth, and also having one and the same effect in the constitution, shows that they must all undergo a change, by which they are reduced to one particular form. We cannot say what that form is, whether it is the calx, the metal, or any other that we are acquainted with; but it is probable that it is not any of them, but a new solution in the animal juices peculiar to the animal itself. This is rendered still more probable by this circumstance, that every preparation of mercury put into the mouth, undergoes the same change, and the spittle has the same taste from every one of them. If every different preparation of mercury had the same

properties in the constitution that it possesses out of it, which we must suppose, if it enters and continues in the same form, in that case the venereal poison must be eradicated in as many different ways as there are preparations. Crude mercury would act mechanically, by increasing the weight and momentum of the blood; the calx would act like brick-dust, or any other powder that is heavy; the red precipitate would stimulate by chymical properties in one way, while the corrosive sublimate would act in another, and the mercurius flavus in a third. This last would most probably produce vomiting as ipecacuanha does, which acts as a vomit, whether thrown into the stomach or circulation.

Fourthly, all the preparations of mercury when locally applied act always one way, that is, as mercury; but some have also another mode of action, which is chymical, and which is according to the specific nature of the preparation. The red precipitate is a preparation of this kind, and acts in both these ways; it is either a stimulant or an escharotic.

To ascertain whether this opinion of mercury being in solution in our juices was just, I made the following experiments upon myself. I put some crude mercury into my mouth, as a standard, and let it stay there, working it about, so as to render it easier of solution, till I tasted it sensibly; I then put into my mouth the mercurius calcinatus, and let it remain till I perceived the taste of it, which was exactly the same; but I observed that it was easier of solution than the crude mercury. I tried calomel in the same way, and also corrosive sublimate, after being diluted with water, and the taste was still the same. It was some time before I perceived the taste of the crude mercury in my mouth. I tasted the calx and calomel much sooner. The corrosive sublimate had at first a mixed taste, but when the acid was diluted, it had exactly the same taste with the former; all these different preparations producing the same sensation or taste in the mouth.

From the results of these experiments it would appear, that the mercury in every one of them was dissolved in the spittle, and reduced to the same preparation or solution.

To try whether mercury in the constitution would produce the same

taste in the mouth, I rubbed in mercurial ointment upon my thighs till my mouth was affected, and I could plainly taste the mercury; and as far as I could rely upon my memory, the taste was exactly the same as in the former experiments.

I allowed some time for my mouth to get perfectly well and free from the taste; I then took calomel in pills till it was affected again in the same way. I afterwards took mercurius calcinatus, and also corrosive sublimate. All these experiments were attended with the same result; the mercury in every form producing the same taste, which was also exactly the same as when the several preparations were put into the mouth.

From the above experiments it must appear, that when mercury produces evacuation by the mouth, it certainly goes off in that discharge; and from thence we may reasonably conclude, that when other evacuations are produced from the medicine when in the constitution, as purging, sweating, or an increased flow of urine, that it also goes off by these evacuations, which become outlets to the mercury.

From the above experiments, it appears to be immaterial what preparation of mercury is used in the cure of this disease, provided it is of easy solution in our juices, the preparations easiest of solution being always the best.

XII. OF THE OPERATION OF MERCURY ON THE POISON.

Mercury may be supposed to act in three different ways in curing the venereal disease. First, it may unite with the poison chymically, and decompose it, by which means its powers of irritation may be destroyed. Secondly, it may carry it out of the constitution by evacuation; or, thirdly, it may produce an irritation in the constitution which counteracts the venereal, and entirely destroys it.

It has been supposed that mercury acts simply by its weight in the circulating fluids; but of this we can form no adequate idea; and if it were so, other substances should act on this disease in proportion to their weight, and of course many of them should cure it; but from

experience we find, that such bodies as have considerable weight, as most of the metals, have no effect on this disease. We have no proof of mercury acting by a decomposition of the poison from any of the concomitant circumstances.

Mercury certainly does not cure the venereal disease by uniting with the poison and producing an evacuation. For in those cases where mercury is given in such a way as to produce considerable evacuations, or in those constitutions where evacuations are easily excited by mercury, its effects upon the diseased action are the least; and the same evacuations produced by any other means, have not the least effect on the disease.

Whether the mercury be supposed to carry off the circulating poison, or to decompose it, in neither way could it produce, when locally applied, any effect on a venereal inflammation or sore arising from the constitution; for as long as any of the poison existed in the circulation, none of them could be healed by local applications, the circulation constantly carrying the poison to them; but we find the contrary of this to be true; for a venereal sore arising from the constitution may be cured locally.

The last or third of our modes of action of mercury seems to me the most probable, and for many reasons. First, because the disease can in many cases be cured by raising a violent stimulus of another kind; and perhaps, if we could raise such a constitutional irritation without danger, as we often can in local cases, we might cure the venereal disease in the same manner, and in one quarter of the usual time. Secondly, we find that mercury acts as an universal stimulus, causing great irritability in the constitution, making the heart beat faster, and rendering the arteries more rigid, so as to produce a hard pulse, as has been already observed. It may further be said to produce a disease, or a peculiar or unnatural mode of action in a certain degree. The following case will illustrate this. A gentleman had electricity recommended to him for some complaint he had. The electricity was applied, but without any visible effect. Besides the complaint for which he used electricity, he had a venereal one, for which he was first put under a

course of mercury, and while under it the electricity was applied for the former complaint; but he had become so irritable that he could not bear the shocks of one half their former strength; but the most curious part of the case was, that the shocks had a much greater effect on the disease than what they had before when twice as strong, and he now got cured. This gave the surgeon a hint, and having another occasion to use electricity, also without effect, he put the patient under a gentle course of mercury, and then found the same effects from the electricity as in the former case, and the patient also got well.

The powers of mercury upon the constitution appear to be as the quantity of mercury and the susceptibility of the constitution to be affected with it, without any relation to the disease itself; and we find that the power of mercury upon the disease is nearly in the same proportion. This fact gives us an idea of the irritation of mercury upon the constitution, and consequently an idea of administering it, and of the cure of any disease for which it is a remedy.

As we find that a given quantity of mercury produces double effects in some constitutions to what it does in others; also, that in those cases it produces its effects upon the disease, we are led to believe that it is this effect upon the constitution which cures the disease; and therefore if it did not produce this effect it would also not have performed a cure. I have already observed, that the cure does not go on exactly in proportion to the visible effects upon the constitution, except quantity in the medicine is joined with it; which if true would incline us to believe that there was something more than simply a constitutional stimulus, which most probably is a peculiar specific effect which is not regulated entirely by its visible effects, either constitutional or local, although they appear to have some connection.

This fact being known, obliges us to be more liberal in giving mercury in those constitutions where it makes but little impression, than in those which it easily irritates; although in these last we must not be entirely regulated by its local effects, nor depend upon a commonly sufficient quantity, but be ruled by the sensibility of the constitution, and quantity joined; for in those where the constitution appears to be

very susceptible of the mercurial irritation, where small quantities produce considerable local effects, it is still necessary to have quantity, although it is not so necessary to take the quantity in general that is supposed to be sufficient. We must be guided by the three following circumstances, the disappearance of the disease, the quantity of irritation produced, and the quantity of the medicine taken.

XIII. OF GUM GUAIACUM, AND RADIX SARSAPARILLÆ IN THE VENEREAL DISEASE.

I HAVE hitherto only recommended mercury in the cure of the venereal disease; and indeed it is the only medicine to be depended upon. However, as both the guaiacum and sarsaparilla have been recommended as powerful remedies in this complaint, I took a favourable opportunity of trying their comparative powers in the venereal disease upon the same person.

The guaiacum* I found had considerable specific power over the disease, consequently it may be of service in slight cases, where it may be inconvenient or improper to give mercury on account of some other disease. These cases however I have not yet ascertained; or it may be given in those cases where it is apprehended that the quantity of mercury necessary to subdue the disease would be too much for the constitution to bear; cases which sometimes occur. The sarsaparilla appeared to have no effect at all.

I shall relate exactly the case in which their comparative powers were tried. A man came into St. George's Hospital with venereal sores over almost his whole body: there were many excrescent sores in the armpits, some of which were about the size of an halfpenny; there were the same appearances about the anus, between the buttocks, along the perinæum, between the scrotum and thigh, where those parts come in contact with one another. Those upon the skin in general had the

* The lignum guaiaci was imported by the Spaniards from Hispaniola as a cure for the venereal disease, in the year 1517, having been given to one of them by a native.

common appearance. I ordered a poultice of the gum guaiacum to be applied to the sores in the right armpit; also a poultice of a strong decoction of sarsaparilla and oatmeal mixed, to be applied to the left armpit. These poultices were changed every day for a fortnight; the excrescent sores in the right armpit were entirely healed, and become even with the skin, and covered with a natural skin, although somewhat discoloured; the sores in the left armpit, which were poulticed with sarsaparilla, were rather worse than when the poultice was first applied, as indeed were all the sores, except those in the right armpit. I then ordered the poultice of guaiacum to be applied to the left armpit, which was done, and the sores there also got well in a fortnight; I was now perfectly convinced that the gum guaiacum had cured these eruptions locally.

I next wished to see what effect the gum guaiacum whould have upon the remaining sores when given internally, that is, those about the anus, scrotum, and on the skin in general. The patient began with half a dram three times every day, which purged him; but this was prevented by joining it with opium. In about four weeks all the eruptions were cured, and he was allowed to stay in the hospital some time longer to see if he would continue well; but about a fortnight after he began to break out anew, and in a very short time was almost as bad as ever. I began a second time the gum guaiacum internally, but it had lost all its powers, or rather the constitution was no longer affected by it. He was put under a course of mercury and cured.

CHAPTER IV.

OF THE EFFECTS REMAINING AFTER THE DISEASE IS CURED, AND OF THE DISEASES SOMETIMES PRODUCED BY THE CURE.

In treating of the local effects of the venereal disease, the gonorrhœa and chancre, as also the bubo, I observed that after the virus was destroyed there remained in many cases some of the same symptoms, and particularly after the gonorrhœa. It was also observed, that though all the symptoms were entirely cured, yet they were liable to break out again. A gleet will appear, sometimes attended with pain, so as to resemble a gonorrhœa; after chancres there will be sores resembling them; and buboes after the virus is gone, will not heal, but spread. In the lues venerea the same thing often happens, especially if the inflammation and suppuration have been violent in the parts. These cases puzzle considerably; for it is difficult to say when the venereal virus is absolutely gone. In such doubtful cases the treatment to be followed becomes more undetermined.

Such complaints are more common in the tonsils than in any other part, for we often find that while a mercurial course is going on, and the ulcer on the tonsils healing, or even healed, they shall swell, become excoriated, and the excoriations shall sometimes spread over the whole palatum molle, which renders the nature of the disease doubtful. I believe these excoriations, as well as such other appearances of disease as come on during the use of mercury, are seldom or never venereal. In all such cases I would recommend not to continue the mercury longer than what appears sufficient for overcoming the original venereal complaints, not considering those changes in the case as venereal. The bark is often of service here, and may be given either with the mercury, or after the mercurial course is over.

It often happens that venereal abscesses will not heal up, although they have gone a certain length towards it; for while the venereal action remained in the part, the mercury disposed that part to heal, but under that course the constitution and part had acquired another disposition, proceeding from a venereal and mercurial irritation affecting a particular habit of body, or part, at the time, which new disposition differs from the venereal, mercurial, and natural, being a fourth disposition arising out of all the three. I suspect however that it depends chiefly on the constitution; because if it was owing to the other two, we should always have the same disease; and what makes this opinion more probable is, that it differs in different people, at least it is not cured in all by the same means. The constitution being predisposed, the other two become the immediate causes of action. As soon as the venereal irritation is destroyed by the mercury, or becomes weaker than the other two, then the effects of the others take place. While the venereal action prevails the mercury is of service, and the sore continues healing; but when it is lessened to a certain degree, or destroyed, the mercury not only loses its powers, but becomes a poison to the new disposition that is formed; for, if mercury is continued, and the sore spreads, it should therefore be immediately left off.

Some of the sores formed in this way not only resist all means of cure, but often inflame, ulcerate, and form hard callous bases, so as to put on the appearance of a cancer, and are often supposed really to be so.

We find also that new diseases arise from the mercury alone. The tonsils shall swell where no venereal disease has been before, the periosteum shall thicken, and also probably the bones, and the parts over them shall become œdematous and sore to the touch; but as these complaints arise while under a mercurial course they are not to be reckoned venereal, but a new disease, although they are too often supposed to be venereal and on that account the mercury is pushed as far as possible. In such cases if the complaints for which the mercury was given are nearly cured, and the medicine has been continued a sufficient time after, to complete the cure of those complaints, then of course

it should be left off; and if there be any doubt it should be left off rather sooner than if no such complaint had taken place, because it is probably producing a worse disease than the venereal; and if after the cure of these complaints from the mercury, the venereal disease begins again to come into action, mercury must be given a second time, and now the constitution will be better able to bear it, especially if attention has been paid to the restoring the strength of it. Those diseases of the tonsils and periosteum I suspect have something scrofulous in them.

Besides local complaints arising from the combined action of the mercury, the disease, and the constitution, there is sometimes a constitutional effect, which is a weakness, or debility, a languor, want of appetite, frequent sweats threatening hectic; but these happen mostly in those constitutions with which mercury disagrees. These complaints, local as well as constitutional, arise in some measure from weakness. They are difficult of cure, whether arising from a venereal chancre, bubo, or the lues venerea. Strengthening medicines are of most service: the bark is of great use though in general not sufficient, as it can only more or less remove the weakness, the specific qualities still remaining. What these are, is I believe not yet known, but I suspect that many partake of the scrofula, and this opinion is strengthened by their frequently giving way to sea-bathing.*

I. GENERAL OBSERVATIONS ON THE MEDICINES USUALLY GIVEN FOR THE CURE.

A DECOCTION of the woods, among which are commonly included guaiacum and sarsaparilla, is one of the first medicines in the cure, and many of the cases yield to it, which gives them the credit of curing the ve-

* In a case of an ulcerated rib from a venereal cause, and five nodes on the shin-bone, of twelve months standing, a deep salivation of six months was undergone, after fruitless attempts by gentle friction. None of the sores were healed by the mercury, and the patient was ordered to bathe in the sea, and take the bark. In three or four months the sores all healed up very kindly; but the side last of all.

nereal disease, while such diseases were supposed to be venereal. The sarsaparilla was often given alone, and was found to produce nearly the same effect. The good effects of it in one case established its reputation.* A diet drink discovered at Lisbon was also of considerable service; and as it cured cases similar to those cured by the sarsaparilla, it was imagined that the diet drink consisted principally of a decoction of this root. This was still on the supposition that all those cases were venereal; but it was observed at last those medicines did not cure this disease till mercury had been given, and in tolerably large quantity. This was sufficient to lead some thinking minds to doubt whether they were venereal, or not; and their being cured by different medicines ought to produce a conviction of their being different from the venereal disease, and that they are themselves of different kinds.

The mezereon has also been found to be of service in some symptoms of the lues venerea, such as nodes of the bones, but their being venereal was taken for granted. The mezereon is seldom given in venereal ulcers in the throat, or blotches on the skin, which of all the venereal symptoms are the most certain, and the most easy of cure; yet it was conceived that it removed such symptoms as are the most difficult of cure; but all those cases in which the mezereon has been given with success plainly appear not to have been venereal.

When the hemlock came into fashion in this country it was given in almost every disease, and of course was tried in some of those complaints consequent to the venereal disease; and some of these it was found to cure, so that it now stands upon the list of remedies. Velno's vegetable syrup has had similar effects in some of these cases; and opium appears also to have many advocates. Opium, like the sarsaparilla, and mezereon, was supposed by its first introducers to cure the lues venerea,† but like the sarsaparilla, it appears to have no effect till mercury has done its best, or its worst.‡ It has certainly considerable effects in many

* See in London Medical Essays a case published by Mr. Fordyce, now Sir William Fordyce.

† See Medical Communications, vol. I. page 307.

‡ See a pamphlet published by Mr. Grant.

diseases, both in such as are consequent to the venereal disease, and others arising from other causes.

It has been long a favourite medicine of mine, not only as relieving pain, for that is its common effect, but as a medicine capable of altering diseased actions, and producing healthy ones. In all sores attended with irritability, a decoction of poppy heads made into a poultice is an excellent application. Bleeding sores that do not arise from weakness, but from irritability, have the bleeding stopped immediately by this application. Mr. Pott is, I believe, the first who showed the world its use in mortifications. My first mode of applying it for the cure of diseases was locally, in which I found it had most salutary effects in some cases, and it was ordered afterwards internally upon the same principle, and it was also found to have salutary effects in this mode. In two cases that had been long suspected to be venereal, its effects were very remarkable; and by its having cured them it confirmed me in my opinion that they were not. But when I was informed that they cured the venereal disease in the army in America by opium, I then began to question myself, whether I had formed a right judgment of the nature of those two cases which were cured by opium. To ascertain whether opium would cure the lues venerea or not, I made the following trial at St. George's Hospital.

A woman was taken into the hospital with blotches on her skin which had arrived to the state of scabs, and with well-marked venereal ulcers on both tonsils. A grain of opium was ordered to be taken the first night, two the second, and so on, increasing a grain every night, unless something should arise to forbid it. This was closely followed till the nineteenth night, when she was ordered a dose of physic as she had become costive, and the opium was omitted. On the 20th she began again, and continued increasing the dose as before till it amounted to thirty grains, no alteration being produced in the sores, except what arose from the loss of time, whereby they were rather worse. I concluded, that if she had taken mercury to affect the constitution as much as the opium did, the venereal disease must have been nearly cured or at least much lessened; but as that was not the case, it convinced me that the opium

had no effect whatever on the venereal disease. I then put her under a course of mercury, by friction, and in a short time it affected her mouth, the sores soon began to look better, and they went on healing without interruption, till the disease was cured. I may just observe, she found very little inconvenience from the opium; it kept her quiet, but she was not particularly sleepy.

Opium for the future will be given with another view than what it has commonly been, not merely to allay pain but to cure diseases. As those diseases which opium will cure are not yet known, it will be tried in a thousand cases in which it will not succeed, and in many it will even do harm; but at last it will find its place; and the doses for such purposes will probably far exceed what is given at present. But as opium is capable of doing mischief, it should always be given with great attention to its effects. Its effects are just the reverse in some cases of what they are in common. In some constitutions it increases all the complaints, even such as it commonly cures. I have known constitutions where opium disagreed in every way; where it purged; where it increased the irritability of the bladder and urethra, producing watching, restlessness, and extreme uneasiness. It in some cases seemed to act like a poison: the following is a remarkable instance of this, and is also another proof of its inefficacy in the venereal disease.

Luke Ward was admitted into St. Bartholomew's Hospital, January 12, 1785; his complaint was an ulcer in the throat of three months standing, which both from its appearance, and the symptoms which preceded it, seemed to be venereal. He was ordered two grains of opium twice a day, which he took a few days without any other effect than that of sleeping better at night than usual, when the dose was increased to two grains three times a day. His throat now gave him less pain; but upon inspection was not found to be at all mended. After two days the dose was increased to three grains thrice a day; from this quantity he felt little or no inconvenience: he complained of being a little drowzy; his eyes were rather inflamed, and his face rather flushed. He continued to take this quantity for five days, and then it was increased to three grains four times a day. Next morning the

redness and heat of his face was much increased, and had extended over his whole skin; he complained of pain in his head. His pulse was full and strong; he was bound in his body, and his belly was tense and painful. The opium was omitted, and such remedies as the present symptoms seemed to require were given, but without effect; all his symptoms continuing to increase till he died, which was on the fourth day after; during this time the ulcer increased much, and the discharge of saliva was so great as to resemble a slight salivation.

This case proves in the first place, that the opium had no effect upon the ulcer in the throat; and in the next, that it is a medicine capable of producing very violent effects in the constitution, requiring therefore great caution in the mode of administering it.

John Morgan was admitted into St. Bartholomew's hospital with an ulcerated leg. The common applications were tried for seven weeks, at the end of which time he was in every respect worse, having no sleep from constant pain, and he was sinking very fast. Two grains of opium were given every two hours, for twenty-three days; it made him hot and costive, and his pulse became strong and full, but without sleep or abatement of pain. The dose was increased to four grains every two hours in the day, and eight grains every two hours during the night. The effects were costiveness, retention of urine, loss of appetite, an inflammatory disposition, no sleep, without any amendment of the ulcer. On the third day of taking the last mentioned quantities he awoke from a short sleep delirious, and continued so for twelve hours, when it left him very weak, sick at his stomach, and with a low pulse. In three or four hours the delirium returned and continued forty eight hours; the pulse on its return immediately rose and his strength returned to a very great degree. When it went off he fell into a sound sleep for about eight hours, and awoke very tranquil, though weak; no more opium was given, and the leg in the space of a month healed.

In the first twenty-three days he took twenty-four grains a day; for the last three days he took seventy-two grains a day. In twenty-six days he took seven hundred and sixty-eight, which is nearly two ounces of opium.

Sarsaparilla is frequently given; but the opinions formed of its use appear to be vague and undetermined. It is neither wholly allowed, nor is it absolutely denied to have effects upon the venereal disease. It is the common opinion that sarsaparilla does not cure, except where mercury has been given.

From the comparative experiment made with it and the guaiacum, it would appear to have no effect upon the venereal irritation itself, and therefore can be of no service till that irritation is destroyed; and as mercury is the antidote for that poison, and becomes one of the causes of the complaints which sarsaparilla is good for, therefore mercury is not only necessary to destroy the poison, but also assists in forming the diseases we are now treating of.

From the opinions of its being of service in the venereal disease, it has been, and is still a common practice to give it with the mercury: whether it really is of any service is, I believe, much to be doubted; but it is easy to conceive it in many cases to be of use in preventing the formation of the disease arising from mercury. When given along with the mercury it is often joined with the gum guaiacum, or the wood of the guaiacum, which we know will have some effect.

The sarsaparilla is generally given in form of a decoction, three ounces to three pints of water, boiled down slowly to a quart, and the half or whole is drank every day, generally at three different times, often at meals. It is sometimes ground to a powder, and taken every day with the same effect; but I should prefer the extract made into pills, as the easiest way of taking this medicine.

In many of these cases I have seen good effects from the hemlock, of which the following is an instance; and I would further refer the reader back to the observations given of this medicine when treating of the disease produced in consequence of a bubo, p. 305.

A poor woman had undergone repeated salivations, which had always relieved the most pressing symptoms; but after being afflicted more or less for three or four years, ulcers broke out in her nose, and all over her face, with what is called a true cancerous appearance. The sores became soon very deep, and gave very considerable pain. Mercury,

sarsaparilla, and bark were given, without effect; the sores getting daily worse, the parts affected were ordered to be held over the steam of a decoction of hemlock every four hours, and as much extract to be taken internally as the patient could bear. She had sleep, and was free from pain the first night; and in a few days the sores put on a healing appearance. She lost her nose and one side of her mouth; but in six weeks time every part was skinned over. She remained well for three months, when the disease returned with redoubled violence and soon destroyed her: probably the hemlock should have been continued longer.

II. OF THE CONTINUANCE OF THE SPITTING.

It sometimes happens that the spitting continues after there is every reason for supposing the mercury is entirely out of the constitution; for the taste of the medicine shall be entirely gone: this is similar to some of the symptoms of the different species of the venereal disease. As it is only a continuation of an action, or an effect of mercury when in the constitution, it is necessary to distinguish it from the original, or from the immediate effects of mercury; since on this distinction rests the method of cure. This may be reckoned a gleet of these parts. Such constitutions have been generally supposed scorbutic: and where there is a great susceptibility of the mercurial stimulus in these parts, the salivation will continue for months after the mercury has been completely removed; but this medicine not being given now in quantity sufficient to produce such violent effects on the salivary glands, these cases seldom occur.

In such cases I would recommend strengthening diet, and strengthening medicines: bark, and steel, are some of the best. Sea-bathing is one of the best restoratives of relaxed habits, especially after mercury. Mead's tincture of cantharides is supposed to be of service in those cases. I am inclined to believe that a solution of opium might be of service as a gargle.

The alveolar processes have sometimes become dead, and exfoliations

have taken place; this alone has kept up a discharge of saliva. When this happens, we must wait till separation takes place, and extract the loose pieces, after which the salivation will subside.

I have seen part of the jaw exfoliate from this cause. In most cases the teeth are loose, and in many they drop out.

CHAPTER V.

OF PREVENTING THE VENEREAL DISEASE.

As diseases in general should not only be cured, but when it is possible prevented, it will not be improper to show, as far as we know, how that may be done: for in this disease we can with more certainty prevent infection, its origin being known.

Preventives are previous or immediate applications, and may be divided into various kinds; as those that will not allow the venereal matter to come in contact with the parts; those which wash it off before it stimulates: and those which will act chymically and destroy the poison.

Oils rubbed on a dry part stick to it, and prevent any thing that is watery from coming in contact with it; and as the venereal poison is mixed with a watery fluid, it is not allowed to touch the part.

Every thing which has a power of mixing with the venereal matter, and removing it from the part to which it is applied, may prove a prevention; caustic alkali is the best for this purpose; is unites with the matter, forming a soap, and is then easily washed off.

It is possible this union with the alkali may destroy the poison: the alkali must be much diluted or it will excoriate.

Lime-water would make a good wash.

If both these methods were put in practice there would be still more security.

Goulard's extract of Saturn has the power of coagulating the animal juices. How far this would answer I cannot say, for I can conceive that the matter may be coagulated and the poison not destroyed.

Corrosive sublimate in water, about a grain or two to eight ounces, has been knowh to prevent the catching of the disease when many other things have failed.

PART VII.

CHAPTER I.

OF DISEASES RESEMBLING THE LUES VENEREA, WHICH HAVE BEEN MISTAKEN FOR IT.

THERE is probably no one disease to which some other may not bear a strong resemblance in some of its appearances or symptoms, whereby they may be mistaken for each other. The situation of a complaint also may mislead the judgment. A lump, for instance, in the breast of a woman may resemble a cancer so much as to be mistaken for one, if all the distinguishing marks of cancer are not well attended to. An ulcer on the glans penis, or in the throat, and nose, creates a suspicion of the venereal disease. Even the way in which a disease is caught becomes a cause of suspicion. The fluor albus in women sometimes produces a gonorrhœa in men, but it is not venereal, as has been mentioned, Drinking out of the same cup with a venereal patient was formerly supposed to be capable of communicating the lues venerea; but this notion is I believe now exploded. Of late years a new mode of producing the venereal disease is supposed to have arisen; this is by the transplanting of a tooth, from the mouth of one person into the mouth of another. That such practice has produced disease is undoubted, but how far it has been venereal, remains to be considered.

Diseases which resemble others, seldom do it in more than one or two of the symptoms; therefore, whenever the nature of a disease is suspected, the whole of the symptoms should be well investigated, to see whether it agrees in all of them with the disease it is suspected to be, or only in part. This observation seems to be more applicable to the venereal disease than any other; for there is hardly any disorder that

has more diseases resembling it in all its different forms than the venereal disease; and when a disease resembles the venereal in some of its symptoms, but not at all in others, then those other symptoms are to be set down as the specific or leading ones of the disease to which it belongs; the resembling symptoms to the venereal being only the common ones. But if a disease is suspected to be venereal, though it is not perfectly marked, yet if it resembles the venereal in most of its symptoms, it must be supposed to be venereal, that being the most probable, although it is by no means certain; for probably the venereal can hardly be demonstrated in any case, especially in the form of the lues venerea, from its not having the power of contamination.

Although the venereal disease keeps its specific properties distinct in its several forms, yet its symptoms are in appearance common to many other diseases, and in that light it cannot be said to have any one symptom peculiar to itself. For instance, every symptom of the venereal disease, in form of a gonorrhœa, may be produced by any other visible irritating cause; and often without any cause that can be assigned; even buboes and swelled testicles, which are symptoms of this disease, have followed both stimulating injections and bougies, when applied to the urethra of a sound person; and indeed these two symptoms, when they do arise from a venereal cause, in many cases are only symptomatic, not specific, but more especially the swelled testicle.

Sores on the glans penis, prepuce, &c. in form of chancres, may, and do arise without any venereal infection, although we may observe that they are in general a consequence of former venereal sores which have been perfectly cured.

The symptoms produced from the infection, when in the constitution, are such as are common to many other diseaies; viz. blotches on the skin, are common to what is called scorbutic habits; pains common to rheumatism, swellings of the bones, periosteum, fasciæ, &c. to many bad habits, perhaps of the scrofulous and rheumatic kind. Thus most of the symptoms of the venereal disease in all its forms are common to many other diseases; therefore we are led back to the original cause, to a number of leading circumstances, as dates, and its effects upon others from con-

nection when only local, joined with the present appearances and symptoms before we can determine absolutely what the disease truly is; for all three taken together may be such as can attend no other disease. However, with all our knowledge, and with all the application of that knowledge to suspicious symptoms of this disease, we are often mistaken, often calling it venereal when it is not; and sometimes supposing it to be some other disease when it is venereal.

Rheumatism in many of its symptoms, in some constitutions, resembles the lues venerea; the nocturnal pains, swelling of the tendons, ligaments, and periosteum, and pain in those swellings are symptoms both of the rheumatism and of the venereal disease when it attacks these parts: I do not know that I ever saw the lues venerea attack the joints, though many rheumatic complaints of those parts are cured by mercury, and therefore supposed to be venereal.

Mercury given without caution often produces the same symptoms as rheumatism; and I have seen even such supposed to be venereal and the medicine continued.

Other diseases shall not only resemble the venereal in appearance but in the mode of contamination, proving themselves to be poisons by affecting the part of contact, and from thence producing immediate consequences similar to buboes; also remote consequences similar to the lues venerea.

As errors in forming a judgment of a disease lead to errors in the cure, it becomes almost of as much consequence to avoid a mistake in the one as in the other; for it is nearly as dangerous in many constitutions to give mercury where the disease is not venereal, as to omit it in those which are; for we may observe, that many of the constitutions, which put on some of the venereal symptoms, when the disease is not present, are those with which mercury seldom agrees, and commonly does harm. I have seen mercury given in a supposed venereal ulcer of the tonsils produce a mortification of those glands, and the patient has been nearly destroyed.

When treating of the lues venerea, and giving the symptoms and general appearances of the disease, I related some cases which appeared

to be venereal, though they really were not; and I shall now refer the reader to these, as it will be unnecessary to given them again here, although if they had not been formerly taken notice of this would have been a very proper place.

As the diseases in question are various, and not to be reduced to any system or order that I am acquainted with, I shall content myself with relating the cases, and thereby put it in the power of others to judge for themselves, if they should not be inclined to adopt the conclusions I have drawn from them.

On the 28th of July 1776, a gentleman, then in the West Indies, scratched the end of his finger with a thorn. On the 31st he opened an abscess on the shoulder of a negro woman who had the yaws, and had been long subject to such abscesses in different parts of the body, and to incurable ulcerations afterwards. At the instant after the operation, he perceived a little of the matter upon the scratch, and exclaimed that he was inoculated. On the 2nd of August, he amputated a boys finger of thirteen years of age, for a sore resembling worm-eaten wood. The scratch on his finger did not heal, but from time to time threw off whitish scales: this appearance alarmed him, and he rubbed in mercurial ointment very freely. Notwithstanding this, in the month of September, a painful inflamed tumor appeared on the second joint of the finger, which was soon followed by several others on the back of the hand, in the course of the metacarpal bone of the forefinger. He still continued the mercurial friction, but without effect, for the tumors daily multiplied; and by the month of November extended to within a small distance of the axilla. They did not go on to suppuration at this time. About the end of November he began to be affected with severe nocturnal pains in different parts of the body, but especially along the tibia and fibula, with frequent severe headachs, which continued to increase to an almost intolerable degree for five months, though he used mercurial friction, with decoction of sarsaparilla every day in great quantity.

In the month of May 1777, a scabby eruption appeared in different parts of the body, especially the legs and thighs, and the before men-

tioned tumors ulcerated; but this was followed by a remission of the nocturnal pains.

He never could bring on a salivation, though his mouth was constantly tender, even for months. The ulcerations became daily worse, and a voyage to England was thought the only resource. He arrived in London the 1st of August, and by the advice of Dr. William Hunter and Sir John Pringle he began again a course of mercury and sarsaparilla, with a milk diet. I was called in, and judging that two thirds of a grain of mercurius calcinatus every day was too small a dose, if it were judged to be venereal, it was ordered to be gradually increased to five grains: and he continued this course till November, when all the sores were perfectly healed.

He now discontinued the mercury, and remained free from all symptoms of the disorder, except some nodes on the tibia, and rheumatic pains on exposure to cold, until about twelve months ago he began to have an uneasiness in swallowing, a rawness in the throat, and a discharge of viscid mucus from that and the posterior nostrils, all of which still continue.

The following observations may be made on the above case.

There can be little doubt that the disease was the yaws. The yaws is a disease that resembles the venereal in several of its symptoms as well as in the manner in which it is most commonly communicated. It differs however in some essential particulars. The yaws have a regular progress, after going through which they leave the constitution in an healthy state, at least free from that disease: it being sufficient for the cure that the patient be put in a state favourable to general health. Thus, a negro labouring under the disease must do little or no work, be kept clean, and have a better diet than usual. Under these circumstances, he commonly gets well in from four to nine months; although the unfavourable cases will continue much longer. Various medicines are given for the cure, but it is not clear that any of them do good. Mercury has considerable power over the disease, without being a specific for it. If given early it will either check the progress of the disease or perhaps even heal up all the sores on the skin: but nothing is gained

by this, for the disease soon breaks out anew. Some practitioners of medicine in the West Indies, are of opinion that interrupting the course of the disease by mercury is productive of no other evils than those of loss of time, and an imperfect cure; others affirm, that it is often the cause of what they call the bone-ach. Towards the end of the disease it is generally allowed that mercury may be given safely, and even with advantage. It is probable the long continuance of the disease being above fourteen months, and also the pains in the bones in the present case, were owing to the very early and free use of mercury. It may be allowable to add, the yaws do not differ more from the venereal disease in curing themselves, than in this circumstance, that, like the small-pox, they affect none a second time.

A gentleman applied to me for the cure of chancres, situated on the attachment of the prepuce to the penis, and also on the frænum. Mercury was used chiefly by friction, in order to affect the constitution; it was also applied to the sores, in order to affect them locally The cure of the chancres went on gradually and without interruption, and in about five weeks they were perfectly healed. He almost immediately had connection with a woman, and long before we could suppose the mercury had all got out of his constitution. In a very few days after connection the prepuce began to be chopped all around on the edge of its reflection. He continued his connections, and upon its growing worse he applied to me; and I found the chops very deep, and the prepuce there so tight and sore that he could not bring it back upon the penis. The question now was, whether this was venereal or not? The sores themselves did not appear to be so, but more was to be taken into the account than simply appearances. It was first to be considered, whether it might possibly be a return of his former complaint. This could not be the case, because they were not in the same parts. It was next to be questioned, was it possible for this part of the prepuce to have been contaminated at the same time with the former, without having come into action till now, having been prevented by the course of mercury, which had not cured the disposition, and being now left off it had come into action? This could not be well answered, although not

probable, because it appeared to come too soon into action after the leaving off of the medicine, for I did suppose there was still a great deal of mercury in the constitution. Was it then possible for him to have caught it from the woman? This I supposed could not have been the cause of these chops, whatever effect this connection might have to render them venereal hereafter, for they appeared too soon after it, especially as he had mercury in his constitution at the time, and as the parts had been accustomed to the application of venereal matter but a very little time before. Although from all circumstances taken together I was convinced it was not venereal, yet an apprehension arose in his mind concerning the possibility of having given it to the lady, as he had connection after their first appearance. I was equally convinced of the impossibility of the one as of the other, therefore desired him to rest easy on that head. He went immediately into the country, and without doing any thing for those chops they got perfectly well. In less than a fortnight after this connection the lady became a little indisposed with a slight fever, and a swelling came in one of her groins. I watched the progress of this swelling, which was slow, and I did not believe it to be venereal. It at last formed matter, and broke, and a poultice was applied to it. Instead of ulcerating or spreading, it rather took on a healing disposition, and in about six weeks it was perfectly well. While it was healing, scurfy eruptions came out on the skin, some on the face and thighs, but more especially on the hands and feet, where the cuticle peeled off. Upon the first appearance of these I was a little staggered, but as the sore was healing I was unwilling to give credit to the appearance, and therefore begged that nothing might be done, and they all got well.

From the general outline of these cases, one would naturally have said they were venereal, but the particular circumstances being all investigated, and the whole taken together, led me to suppose that they were not, and the event proved that to be the case.

The following case was communicated by Mr. French of Harpur-street.

"June the 9th, 1782, a gentleman applied to me for an ulcer which was seated on the glans penis, attended with excessive pain. Knowing him to be an intemperate man, and learning from himself that, during

a state of intoxication, he had been connected with a woman, I judged the complaint to be venereal. He was now in a feverish state and unfit for the exhibition of mercury, I therefore prescribed for him decoction of bark with elixir of vitriol and tinctura thebaica proportioned to his pain. I directed him to abstain from every kind of fermented liquor, to live chiefly upon milk, and to wash the ulcer with a liniment composed of equal parts of oil of almonds and aqua sapphirina."

"About the 17th of the same month, some check having been given to the fever, the sore looking cleaner, and his pain having abated, I ordered him small doses of the argentum vivum and extract of hemlock.

"July the 4th, finding the mercurial course disagree, I ordered three grains of the extract of hemlock to be taken two or three times a day, and the decoction of bark to be taken as before, with twenty drops of tinctura thebaica, which was gradually increased to sixty, at bed time.

"The ulcer had spreed very much during the mercurial course, and had now destroyed half the glans penis.

"October 1st, Mr. Hunter was consulted, and ordered the patient to add the powder of sarsaparilla to the decoction of bark, to take laudanum freely, and wash the sores with tinctura thebaica. Soon after beginning this course the remainder of the glans penis sloughed off, the parts gradually healed, and health was restored."

There were two other symptoms in this case which deserve to be taken notice of, a considerable enlargement of the scalp on the right side of the os frontis, and on the left parietal bone, attended with excessive pain, and vibices resembling the sea scurvy on the inside of the left tibia, both of which disappeared in the course of the cure.

Some months after, the tumor in the head returned, and several abscesses were formed, which were opened, and the cranium found carious to a great extent. On account of the pain, he has for some months past taken two hundred and forty drops of laudanum, and six grains of opium daily. These sores healed up, and others broke out in different parts of the head, which also got well, and in June 1785 there was only one large ulcer in the angle of the right eye."

A lady was delivered of a child on the 30th of September 1776; the

infant being weakly, and the quantity of milk in the mother's breasts abundant, it was judged proper to procure the child of a person in the neighbourhood to assist in keeping the breasts in a proper state. It is worthy of remarking, that the lady kept her own child to the right breast, the stranger to the left. In about six weeks the nipple of the left breast began to inflame, and the glandsof the axilla to swell. A few days after several small ulcers were formed about the nipple, which spreading rapidly, soon communicated and became one ulcer, and at last the whole nipple was destroyed. The tumor in the axilla subsided, and the ulcer in the breast healed in about three months from its first appearance. On inquiry, about this time the child of the stranger was short breathed, had the thrush, and died tabid, with many sores on different parts of the body. The patient now complained of shooting pains in different parts of the body, which were succeeded by an eruption on the arms, legs, and thighs, many of which became ulcers.

She was now put under a mercurial course, with a decoction of sarsaparilla. Mercury was tried in a variety of forms, in solution, in pills internally, and externally in the form of ointment. It could not be continued above a few days at a time, as it always brought on fever or purging, with extreme pain in the bowels. In this state she remained till March 16, 1779, when she was delivered of another child in a diseased state. This child was committed to the care of a wetnurse, and lived about nine weeks; the cuticle peeling off in various parts, and a scabby eruption covering the whole body; the child died.

Soon after the death of the child the nurse complained of headach and sore throat, together with ulceration of the breasts. Various remedies weregiven to her, but she determined to go into a public hospital, where she was salivated, and after some months she was discharged, although not cured of the disease. The bones of the nose and palate exfoliated, and in a few months she also died tabid.

Of the various remedies tried by the lady herself, none succeeded so well as sea-bathing. About the month of May she began a course of the Lisbon diet-drink, and continued it with regularity about a month, dressing the sores with laudanum, by which treatment the sores healed

up; and in September she was delivered of another child, free from external marks of disease, but very sickly; and it died in the course of the month.

About a twelvemonth after the sore broke out again, and although mercurial dressings and internal medicines were given, remained for a twelvemonth, when they began again to heal up.

The following cases being all derived from one stock, they show as much as possible, that new poisons are rising up every day, and also very similar to the venereal in many respects, although not in all; therefore it is the want of similarity that becomes the criterion to judge by, and not the similarity. The parents of the child, who was the subject of the following history, were, and are to all appearance healthy people. The child was weakly when born; and the mother having little or no milk, when it was three weeks old she gave it to a nurse whose milk was then seven months old, and was giving such to her own child. The foster-mother allowed her own to suck the right breast, while the other sucked the left.

The nurse observed that the skin of the foster-child began to peel off; but no rawness or soreness took place except about the anus, where it looked as if scalded. The same kind of peeling took place on the lips, but they did not appear to be sore, although the people in the country said it was the thrush. The inner surface of the mouth and tongue appeared sound. In a fortnight after her receiving the child it died, and then she allowed her own child to suck both breasts for three weeks; at the end of which she came to town to nurse a gentleman's child.

She gave suck to this second child; but after being in town about ten or eleven days, she did not feel herself perfectly well; which made them suppose that the new mode of life, confinement in town, and probably better living, might not agree with her, and she went into the country, and took the gentleman's child with her. About three or four days after she went to the country, for instance, about a fortnight after she took this child, and five weeks after the death of the first child, her left nipple, which the first nursed child had always sucked, began to be sore, so that she could not let the child suck it. This ulcer on the nipple

became extremely painful, and in a day or two eruptions came out on her face, which were soon followed by the same over her whole body, but most on her legs and thighs; they continued coming out for about a fortnight, and had at first very much the appearance of the eruptions of the small pox on the third day of their eruption attended with fever, universal uneasiness, and great pain. The salt of wormwood mixture, with the testaceous powders, was given every four hours, with some opening medicines, as the infusion of sena, soluble tartar, &c. every second or third day, but without effect, the complaints encreasing.

Two or three days after the eruption on the skin appeared, one of the glands of the armpit began to swell, and formed matter, and was opened within a fortnight after its first appearance, and healed almost directly. Some of the eruptions encreased fast, and became very broad sores, nearly of the size of a half crown, especially on the legs and thighs, and were covered with a broad scab; many remained small, and only appeared like pimples. About a fortnight after the first appearance of the eruption, some began to die away, becoming less sore; and about four weeks after this appearance a foul ulcer attacked the left tonsil.

The surgeon in the country, from all these circumstances, finding he could not get any ground by the beforementioned treatment, determined to give her the solution of the corrosive sublimate, of which he gave half a grain in solution night and morning. In about a week there seemed to be a stop put to the spreading of the ulcers, and the discharge to be lessened something, the ulcer in the throat putting on a better appearance.

It was at this period I first saw her, which was about six weeks after the first appearance of the eruption, and a fortnight after the appearance of the ulcer in the tonsil. The eruptions were then very much as before described; but the ulcer in the tonsil was clean and healing. From the history of the case I did conceive it not to be venereal; I therefore desired that all medicines might be left off, which medicines could only have been taken for a fortnight at most, because it was after the appearanceof the ulcer on the tonsil the mercury was given, which was only of a fortnight's standing when I saw her. She soon after recovered.

After being well for some time, she again applied to the surgeon in the country, an abscess having formed where the complaint first began in the breast, attended with fresh eruptions on the face.

The abscess was opened, and it healed up in a few days, and upon taking some cooling physic the eruptions disappeared. She has continued very well ever since, without any other bad effect than the total loss of her nipple. This case was certainly understood to be venereal.

About five days after the appearance of the eruption on the nurse, the gentleman's child was taken away and given to a healthy woman of a florid complexion, aged twenty-four years, and who had lain in with her first child eleven months when she became wet nurse to this child. After a few days she observed eruptions on the child's head, not unlike those already described on the first nurse which it had sucked. Its mouth soon after became excoriated, so that it sucked with difficulty. After a short time those eruptions on the head became dry and peeled off, others appeared on the face, knees and feet, but wholly unlike the former, as the first maturated, while the latter appeared only cutaneous, peeling off and leaving a circumscribed spot of a light dun colour, which continued encreasing for five weeks. These eruptions continued nearly three months from their commencement, at which period the child was extremely emaciated, but no particular treatment was indicated, so no medicine was exhibited, and in a few weeks after it came to London and got perfectly well.

The second nurse, a few days after giving suck to the child, had blotches appear on her left breast, precisely the same with those on the first nurse; with this difference only, that they were fewer in number, and attended with a greater degree of phlegmonous inflammation. They continued, and encreased in size for seven or eight days; then the nipple of the same breast became ulcerated; the ulceration spreading so much as to endanger the loss of it. Her thighs now became diseased, and afterwards her legs.

She suckled this child about twelve weeks. The disease seemed no longer to encrease, and in twelve or fourteen days after this entirely disappeared without her taking any medicine, except a few ounces of the

decoction of the bark. The only application to the breast was unguentum simplex.

The milk at this time became so small in quantity, that they were under the necessity of providing a third wetnurse for the child, and the second returned to the country. Her own child being weaned she had no further occasion for the milk, and in a few days it wholly disappeared; but by way of amusing the child when peevish, she allowed it to take the nipple, which had been diseased, into its mouth; the consequence was, that in a few days this child also became diseased in like manner with the former. She now applied to an eminent surgeon for assistance, who not being acquainted with the history, supposed it venereal, and ordered a colourless medicine, supposed from circumstances to be the solution of sublimate, sixteen grains to half a pint of water; the dose a table spoonful. She took this medicine as directed and also gave it to her husband and child; the child a teaspoonful only at a time. While taking this medicine she got well.

The third wetnurse, like the former, was in a short time affected, but the blotches in this case were still fewer in number, the disease appearing to lose considerably in its power, as each fresh infection became less malignant than the former. She got well without taking any medicine.

The following case shews the effect of the state of mind upon the body, and the bad consequence attending the patient's being indulged in his own opinions respecting the nature of a disease. It is given as drawn out by himself for my opinion.

"In May 1789, when in London, I was unhappy enough to have a connection with a woman of the town. Five days after I took more than usual exercise, and the day being warm I perspired profusely. This affected my head, more particularly my forehead. In this situation I went into the country, and while on the road the sweating increased; when it went off, it left a burning heat about the forehead, so that I could not wear my hat. This heat continued all night, attended with an external pain round the forehead. The next day it encreased, but the day after its violence seemed to lessen; but it continued more or less for several weeks. On my return home I was connected with my wife.

" My mind became so much agitated, that I found it impossible to be at peace till I unfolded my situation to a surgeon and apothecary.

" I began to fear, that those affections of the head might arise from disease. The surgeon seemed to apprehend no danger. I pressed him to give me some opening draughts, to carry off the inflammation about the head, and flattered myself that they would also carry off any virus that I had contracted. Notwithstanding this, I still, however, found some of those disagreeable sensations, together with an uneasiness in the throat and teeth.

" All this time there was nothing more than usual in the genital parts, but a degree of heat not felt or observed before.

" I now conceived that this heat was increasing. By a constant and minute inspection, I found the size of the penis at times to diminish, the nut assumed a pale yellowish colour, and the glans behind the nut seemed to be covered with mucus. The heat about the head diminished; the throat and teeth felt more uneasy.

" In the course of a fortnight after my return, I persuaded my apothecary to give me small doses of calomel. For the first few days they worked me very violently. The quantity of calomel was then lessened. All this time I felt no discharge of any kind; but after taking those medicines a few days, I felt some heat and pain in the groin, &c. The penis seemed at times hot, and I felt some shooting pains about the head.

" A fortnight completed this course, and now I entered upon some alteratives. While taking them, my throat seemed to get worse and worse, but more so towards night.

" Six weeks after the connection I was pronounced well, and left off all medicines.

" Soon after this, in the mornings, prior to my making water, I perceived a small quantity of a whitish discharge on the opening of the lips of the urethra; never in quantity so large as a pea, and never but in the morning. I was induced to try what stain this would give to clean linen: it left a greenish spot. This was immediately communicated to the surgeon, who bid me think nothing of it, assuring me it was of no consequence.

" My mind was too unhappy to remain satisfied in this state, or with those assurances; I therefore had the advice of a physician.

" He said if I was affected, it was in a very small degree, and that there was no possibility of my injuring my wife. Notwithstanding which, he thought I had better take some medicines, which he would prescribe, for a fortnight, and then go on with strengthening remedies. I now began taking these medicines. I took a large teaspoonful of an electuary three times a day. My throat soon began to feel better. After the fortnight the strengthening plan was begun.

" Those medicines being left off, my throat became uneasy as before. Once or twice I discovered a discharge from the urethra, which was quite clear, and more glutinous than my water. This I always found was after erections.

" The strengthening medicines were continued about a fortnight.

" My throat felt very sore at night, and looked red all round. A hard reddish pimple now appeared in the roof of the mouth: those circumstances made me very unhappy,

" I now began taking an electuary like the former, and drank a pint of decoction of the woods every day. This plan was adhered to for six weeks.

" I took strengthening medicines for about a fortnight, and then left them off.

" I used a variety of things for my mouth and throat; one time an electuary, and gargled with port wine; another time I gargled with a decoction of roses, honey, &c.

" I now find myself in a much worse situation than ever; for although I have never been disabled from pursuing my business, I have some additional disagreeable sensations: very unpleasant feelings in the shinbones, which affect me more after walking or standing, as if pins were pricking me. They are not violent, but disagreeable. My legs sometimes seem uncommonly stiff; there is a soreness in the knee, and in the hollow under the knee; a pain in the small of the back, sometimes in my arm. I think my corns, which are often troublesome, have been more so, especially in damp weather.

" About three months ago I discovered a spot on the inside of the right thigh, the size of a shilling, which at times assumed a copper colour, but in common the colour of the skin: but whenever heated, it assumed this colour. On the other side, several more of a lighter kind have appeared. There are several small ones of the size of a large pin's head about different parts of the body, rising above the skin. There is no particular pain attends them.

" Within this week some very large spots have appeared about the neck, and the right side of the neck feels sore at times. For some time past my nose and forehead have felt different from what they used to do. There has been a heat, attended at times with a pricking and throbbing pain, with a stiffness that I cannot describe. The skin about the nose seems red. This instant there is a pain and stiffness felt in it. My eyes seem weaker than they used to be, and sometimes look red. My mouth has been affected: the membrane appears pale, and broken in some places. The saliva is very disagreeable: the breath is not offensive. Whenever I have wind in the stomach, my throat is very sore indeed.

" It is necessary that I should observe that I am of a scorbutic habit, which has always thrown out pimples betwixt my shoulders, down my arms, and sometimes some few in my face.

" When I returned home in May, I found my wife looking pale, and weak. This I concluded to be the effect of breeding. It appears since, that on my return, she must have been advanced about six weeks in her pregnancy. I prayed the surgeon to tell me if he thought there was any danger of my injuring her, and that if there was, I would fling myself at her feet, and inform her of what had happened. This I also told the doctor: both assured me there was no danger. Towards the latter end of June she seemed to have a slow fever. The apothecary attended her. She appeared very weak. By degrees she got better. In July she received a terrible fright, so that she became very poorly again; was very weak, and complained of an unusual discharge from the vagina. For this, through much persuasion, I got her to consent to have the doctor's advice. This I pressed very much, as he was acquainted with all the

circumstances that had attended me. I was very apprehensive that her complaints were now the effect of an injury received from me. I told the doctor of the discharge, prayed him to give her symptoms due consideration, and pressed him to prescribe such medicines as would effectually remove the complaint. He attended her, and assured me that there was not the smallest appearance of her complaints arising from such a cause. He said they were the effects of weakness and pregnancy. She never complained of any pain in the parts, nor of any heat in making water. At this time she was troubled with an almost unremitting pain in her teeth, gums, &c. The doctor prescribed some strengthening cordial medicines, which she continued to take for some time. She grew better, but was almost continually affected with pains in her teeth, forehead, ears, &c. This discharge lessened by degrees. Her habit was always disposed to be costive, but more so when with child. This the doctor accounted for from her habit, her being with child, &c. and assured me that every thing was perfectly natural, and that there was not the smallest appearance of any thing arising from disease. About a month or more before she was brought to bed, those complaints in her teeth, ears, and head, seemed to increase, a redness appeared over her eye-brows, where there was great pain, &c.

" At this time I observed some little spots about her face, of a yellowish colour, one in her forehead, two or three less near her ears, &c. and some few on her arms.

" At length she was brought to bed; had a fine child, perfectly healthy. Her teeth were still sore; the right side of her cheek so much so, that she could not bear it to be touched. Her left breast began now to be very troublesome, and the more so as the milk advanced. (In this breast she always complained of a pain from her first child, and sometimes she fancied she could feel a hard lump). Both her nipples were very sore, were surrounded with little ulcerations, but the left was by far the worst. It was very painful to her to give suck; she was obliged to have her breasts drawn now and then. Her nipples got better by degrees, and she now tells me they are well. There was early after she had children a redness betwixt the breasts; but this also went off.

" There now seems a little redness on each side of her nose near her eyes, and sometimes the tip and sides of her nostrils appear red. She says there is no pain. Her pain is now in the left gums, and extends through to the cheek. Her water is frequently very thick, and there is, very soon after it is discharged, an evident sediment in it.

" The infant is free from all appearances of disease, but at present is afflic ted with the snuffles to a degree, that exceeds any thing of the kind that I ever saw in any of our other children. I am always disposed to anticipate the worst, and it pains me very much, least it should arise from this general source of evil. The child is hearty, thrives very well, sleeps well. Two children that are at home have now and then been poorly: in the corners of their mouths there was, for weeks, an evident excoriation, assuming a whitish colour. This I think is now gone. There seems some small pimples about the neck, very small, and there is two or three of these small spots about each of them; and sometimes their noses are red and sore. Indeed my mind has been afflicted with an idea, that I have by this unguarded act injured my whole house. My situation is truly wretched. I had made up my mind to take time by the forelock, to attack this disorder very early; but, alas! I am afraid I have fallen into bad hands.

" This business involves a great variety of questions of the first importance to me. The questions, with their answers, must be referred to your better judgment: I will state two or three for our satisfaction.

" If my complaints arise from lues, is it possible for me to have injured my children by kissing them, sleeping, &c.?

" If my wife's discharge was venereal, would it not most likely have produced a similar one in me: or, would not my having received the lues into my habit prevent it?

" Are those pains in the head, teeth, ears, &c. likely to arise from this cause? If my wife's nipples had been affected from the complaint, would the person that drew her breast be infected; and if so, how long, and in what manner would her infection appear? Would the nipples have got well had this been the case? Can the child's snuffles arise from this

cause? Can any part be injured by this complaint, without manifest inflammation, swelling, and discharge?

"I have only to add, that I pray you, Sir, to be good enough to give this complex and unhappy case every necessary attention. I should wish for effectual relief."

I. OF DISEASES SUPPOSED TO BE VENEREAL PRODUCED BY TRANSPLANTED TEETH.

Since the operation of transplanting teeth has been practised in London, some cases have occurred in which the venereal infection has been supposed to be communicated in this way; and they have been treated accordingly; nor has the method of cure tended to weaken the suspicion: yet when all the circumstances attending them, both in the mode of catching the disease, and in the cure when treated as venereal, are considered, there is something in them all which is not exactly similar to the usual appearance of the venereal disease when caught in the common way; especially too, when it is considered that some of the cases were not treated as venereal, and yet got well, and therefore the cures of the others which appeared to be from mercury, are not clear proofs of their having been venereal.*

I believe that I have seen most if not all the cases of this kind which have occurred, and have attended some of them. In all of them the time of local affection after the insertion of the tooth, has been regularly a month, which is too long for the venereal to take effect at a medium; and where they have produced constitutional symptoms, those again have either followed the local too close for the venereal, or too regular as too time. But it may be advanced, that a disease has been produced probably as bad in its consequences as the venereal. That a disease has been formed in this way is certain.

* It is to be remarked here, that I do not, in the present case, lay any stress at all on my opinion of the lues venerea not having the power of contamination; and I believe we must allow, if these are venereal, it must have been the lues venerea in the person from whom the tooth was taken; for chancres are not common in the mouth, and they would be seen on examination. I believe few discharges similar to gonorrhœa take place there.

The first case of this kind which came under my care, was a lady who had one of the bicuspidati transplanted. The transplanted tooth fastened very well. About a month after she danced till five or six o'clock in the morning, caught cold, and had a fever in consequence, which lasted near six weeks. In this time ulceration in the gum and jaw took place, though it was then not known; and when she was beginning to recover, it was found that not only the gum and socket of this tooth were diseased, but also those of the teeth next to it. The two teeth were taken out, and the sockets of both afterwards exfoliated, but the parts were very backward in healing. This backwardness gave rise to various opinions, the principal of which was, that it was venereal. In the mean time a rising appeared upon one of the legs, which was of the indolent node kind: this was also suspected by some to be venereal, or rather was a corroborating circumstance of the former opinion; but I gave it as my opinion that it was not. I desired she might go to the sea and bathe, which she did, and got perfectly well, both in the jaw and leg, and has continued so ever since.

The second case of this kind I have seen was also in a young lady: the transplanted tooth fastened extremely well, and continued so for about a month, when the gum began to ulcerate, leaving the tooth and socket bare. The ulcer continued, and blotches appeared upon the skin, and ulcers also in the throat. The disease was treated as venereal, the complaints gave way to this course, but they recurred several times after very severe courses of mercury: however, she at last got well.

The only observation I can make on this case is, that the symptoms recurred after continued courses of mercury, much oftener than is usual in venereal cases; and I had my suspicions all along that it was scrofulous.

The third case was of a gentleman, where the transplanted tooth remained, without giving the least disturbance, for about a month, when the edge of the gum began to ulcerate, and the ulceration went on till the tooth dropped out. Some time after, spots appeared almost every where on the skin; they had not the truly venereal appearance, but

were redder, or more transparent, and more circumscribed. He had also a tendency to a hectic fever, such as restlessness, want of sleep, loss of appetite, and headach. After trying several things and not finding relief, he was put under a course of mercury, and all disease disappeared according to the common course of the cure of the venereal disease, and we thought him well; but some time after, the same appearances returned, with the addition of swelling in the bones of the metacarpus. He was now put under another course of mercury more severe than the former, and in the usual time all the symptoms again disappeared. Several months after, the same eruptions came out again, but not in so great a degree as before, and without any other attendant symptoms. He a third time took mercury, but it was only ten grains of corrosive sublimate in the whole, and he got quite well. The time between his first taking mercury and his being cured was a space of three years.

Query: Could this case be venereal? The two first courses of mercury removing the eruptions, would seem to prove it was; but the third course also removing them, which consisted of only ten grains of corrosive sublimate, would seem to prove that it could not be venereal; for if it had, the appearances which returned after the second course, in which a considerable quantity of mercury had been given, would not have yielded to ten grains.

The fourth case was that of a young lady who had a tooth transplanted, and about the same distance of time after it, as mentioned in the former cases, the gum began to ulcerate, and the ulceration was making considerable progress. The surgeon who was first consulted desired mercury to be given immediately. I was afterwards desired to see her, and advised that mercury should not be had recourse to, that we might ascertain the nature of the case; for if she took mercury and got well, it would be adding one more to the number of the supposed venereal cases arising from such a cause. I recommended drawing the tooth, that we might see what effects would be produced by the removal of the first cause. The tooth was drawn, and the gum healed up as fast as any common ulcer, and has ever since continued well.

This case requires no comment. I may however be allowed to observe, that if the lady had gone through a course of mercury, she would have in all probability also got well; for the tooth, in the time necessary for completing the course of mercury, would have dropped out; and if this had really happened, we need not hesitate in affirming, that it would have been considered as venereal.

The fifth case was that of a young lady, eighteen years of age, who had one of the incisores transplanted, which fastened very well; but six or seven weeks after the operation, an ulceration of the gum took place, the tooth was immediately ordered to be removed, and the bark was given without any other medicine being had recourse to, and she got well in a few weeks.

The sixth case was that of a gentleman, aged twenty-three, a native of one of the West India islands, who had the two front incisores transplanted; and about the same time after the operation, as in the former cases, an ulceration of the gums took place, which increased to a very great degree, and the edges of the gum sloughed off. An eminent surgeon was consulted, who ordered the bark, and the patient without taking any other medicine got well, in nearly the same time as the lady in cases four, and five, who had the teeth taken out. The gums recovered themselves perfectly, but were considerably shorter.

If we take some of the above cases and consider them as they at first appeared, we shall almost pronounce them to have been venereal. If we take the others, we shall pronounce them absolutely not to be venereal; and if we consider every circumstance relating to those probably venereal, we shall as far as reasoning goes, conclude that they were not venereal. The first case that appeared at the time to be venereal, is the second of those before related; but as I did not attend the lady through the whole of the cure, I can say less upon it; she certainly had the symptoms recur oftener than they do in venereal cases in common, where the disease is attended with no ambiguity, and took more than the usual quantity of mercury; there is therefore in this case something not clearly understood, because it does not exactly agree with venereal cases in general in all its parts.

The fourth case was similar in its recurring, and in the quantity of mercury that appeared to be necessary to remove the symptoms.

The most serious effects of the transplanting of a tooth happened to a young lady, whose case is related in the Medical Transactions by Dr. Watson.

The dentist being alarmed at the first appearance, desired me to go and see her upon his own account. The edge of the gum was just then begun to ulcerate. As I did not know well what was best to be done, I desired him to make a strong solution of corrosive sublimate and let the mouth be often washed with it, also some lint soaked in it and applyed to the part; but as this did not stop its progress, she applied to Dr. Watson, to whose account of the case I must refer the reader, and from that account I must take my materials to reason upon. However I may remark, that the case appears to have been supposed at last to have been venereal, whatever might have been the first opinion, and for the two following reasons; first, from the mode of catching the disease being possible; and secondly, from its not giving way to medicines which are of no service in the venereal disease; and this opinion appears to have been confirmed by the disease giving way to mercury. But the case itself abstracted from the mode of catching it, and even the mode of cure, does not perfectly agree with the common attending circumstances of the venereal, nor has that attention been paid to the necessary circumstances sufficient to determine it to be venereal.

The progress of the ulceration in the mouth, which was the first symptom, was by much too rapid for a venereal ulcer in common; for it must be considered, if venereal, simply as a chancre, or local affection.

Now let us trace the progress of the disease into the constitution. "About this time" viz. when the local disease was making such rapid progress "blotches appeared in her face, neck, and various parts of the body; several of these became ulcerated painful sores."* Now this date of the constitutional affections following the local, is by much too

* Medical Transactions, vol. 3, page 328

soon to be venereal; we know if a lues venerea arises either from a gonorrhœa or chancre, it does not appear in common till about six weeks, often much later, but seldom sooner. I shall leave the circumstance of there being no swelling of the lymphatic glands of the neck, forming buboes, as that is not a constant symptom attending the venereal matter getting into the circulation, although it should be allowed to have some weight, especially where other circumstances do not perfectly agree. The appearances from the constitution when they did take place, were much more violent and rapid in their progress than any venereal blotches I ever saw: we know in the lues venerea that they are months before they arrive at the stage of scabs; also the pain attending those sores did not in the least correspond with the lues venerea. Venereal blotches hardly give any sensation, or at least very little; but after all, mercury cured this disease whatever it was: twenty-eight grains of calomel made into fourteen pills were taken, probably, in ten or twelve days; for it was directed she should take one or two each day, as the bowels would allow; but although tinctura thebaica was given, they purged so much as made it necessary to give no more in this way; but although so little mercury was taken, and had also run off considerably by the bowels, yet "During the taking of these however, the ulceration of her mouth and cheeks did not spread, but were less painful and of a milder appearance; the blotches in her face and body grew paler, and such of them as had ulcerated healed apace and no new ones appeared." "Unguentum cœruleum fortius" was therefore directed "to be well rubbed into her legs and thighs twice a day, in small doses," least it should be determined to the bowels. "In about ten or twelve days her griping and purging returned with violence, the ointment was therefore discontinued; at this time the blotches were all gone; the ulceration in her face and body were completely healed, and those of her mouth nearly so."

The only remark I have to make on the cure is, that the quantity of mercury was not sufficient to cure chancres on the penis, making such rapid progress as those did in her mouth; nor could the same quantity of mercury cure venereal sores on the skin, which had made such rapid

progress as they did in this case; and if we take in the effect this had upon her health, with the termination of the whole, I think we should pronounce it not venereal; for the specific circumstances, if it was venereal, were just as uncommon as the mode of catching.

Many of these cases, suspected of being venereal, I have seen occasionally, and although the patients recovered while under a course of mercury, yet on account of the want of attention in the practitioners to the very circumstances that would decide the disease to be either venereal or not, I pass them over unnoticed.

After having considered the cases themselves of those who had the teeth transplanted, let us also consider the persons from whom the teeth were taken; for I cannot help thinking that this will throw some light upon the subject. Let me suppose that the young girls from whom the teeth were taken really had the lues venerea, and that the teeth were of course also infected, which is a supposition most unfavourable to my real opinion, it appears to me, that even in this case there can be no difference between the gums of the girl from whom the tooth was taken, and the gums of the person who received it; if the ulceration took place in the last from contamination, would not the socket in the girl from whom the taken likewise have ulcerated? But this did not happen in any of them. I have here supposed the teeth capable of being contaminated; although I believe we have never yet seen them have this disease primarily, but only in consequence of its breaking out somewhere else, in the mouth, throat, or nose, and spreading to them; but still, if they are capable of having the disease, and communicating it to others, it becomes very extraordinary that these people should have hit upon the only such teeth that probably were ever so contaminated.

When we consider that the girls, from whom the teeth were taken, had not the least appearance of disease at the time, and had none when the disease broke out in the person who received the teeth, it becomes strange that it should break out in the receivers, and not in the giver.

It is also singular that an ambiguity should follow this disease in all its stages; in the mode of its being caught, the appearance, and the cure

Let us sum up all the arguments in favour of the disease not being

venereal. First; two patients whose cases were similar to the others in their origin, recovered without medicine.

Secondly; they who seemed to be cured by mercury, had not a treatment exactly similar to those who were indisputably poxed.

Thirdly; I consider it as impossible for parts to have the power of contaminating, which have not themselves assumed the diseased action.

Fourthly; the parts contaminating were never known to have been contaminated themselves.

But it must be nearly the same thing to those who want to have teeth transplanted, whether my reasoning is just or not; for a disease in consequence of the operation most certainly has taken place; and in some cases this has been worse, or cured with more difficulty, than the lues venerea in common; and whatever the disease may be, I yet know of no mode of prevention, except the drawing of the tooth early, and that has been tried in one case only, and in that case was successful.

From this account, many may be deterred from having this operation performed; in that light no evil can arise, except being mortified that no means of relief can be had recourse to in cases of bad teeth; but it is to be remembered, that this is a publication of all the unsuccessful cases, which is the very reverse of what is generally practised in medical books; and they are mentioned upon no other principle than that the disease, when it happens, may not be improperly managed.

It may be asked, what is this disease? That may be with more difficulty answered, than what it is not. I should say that a sound tooth transplanted may occasion such an irritation as shall produce a species of disease which may be followed by the local complaints above mentioned.

I cannot conclude without intimating, that undescribed diseases resembling the venereal, are very numerous; and that what I have said is rather to be considered as hints for others to prosecute this inquiry further, than as a complete account of the subject.

THE END.

Fig. 1.

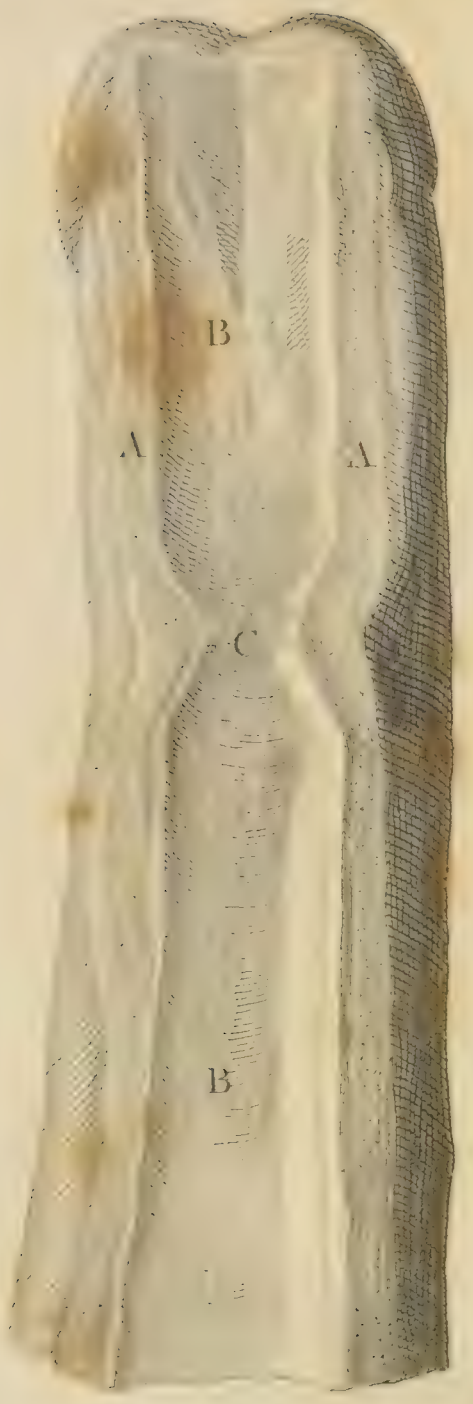


Fig. 2.

EXPLANATION OF THE PLATES.

PLATE I.

FIGURE I.

The penis slit open, showing a stricture in the urethra, about two inches from the glans; the stricture is but slight.

AA. The cut surface of the corpus spongiosum urethræ.

BB. The canal of the urethra, in which may be observed the orifices of the lacunæ.

C. The stricture.

FIGURE II.

The penis slit open for about three inches, to show the lacunæ, which become occasionally an obstruction to the passage of the bougie.

AA. The corpus spongiosum urethra.

BB. The internal surface of the canal of the urethra pointing to the orifice of two of the lacunæ.

C. A bristle introduced into a lacunæ.

D. The end of the bougie introduced into the remaining part of the urethra.

EXPLANATION OF PLATE II.

The urethra opened in two different places, one before the stricture, the other behind: the one before, is through the body of the penis; the other behind, is upon the anterior surface of the membraneous part, and a bougie passes from the one opening to the other.

AA. The crura penis and bulbous part of the urethra all blended together by inflammation and suppuration, which has taken place in many parts.

BB. The prostate gland in a diseased state.

CC. The cut edges of the bladder.

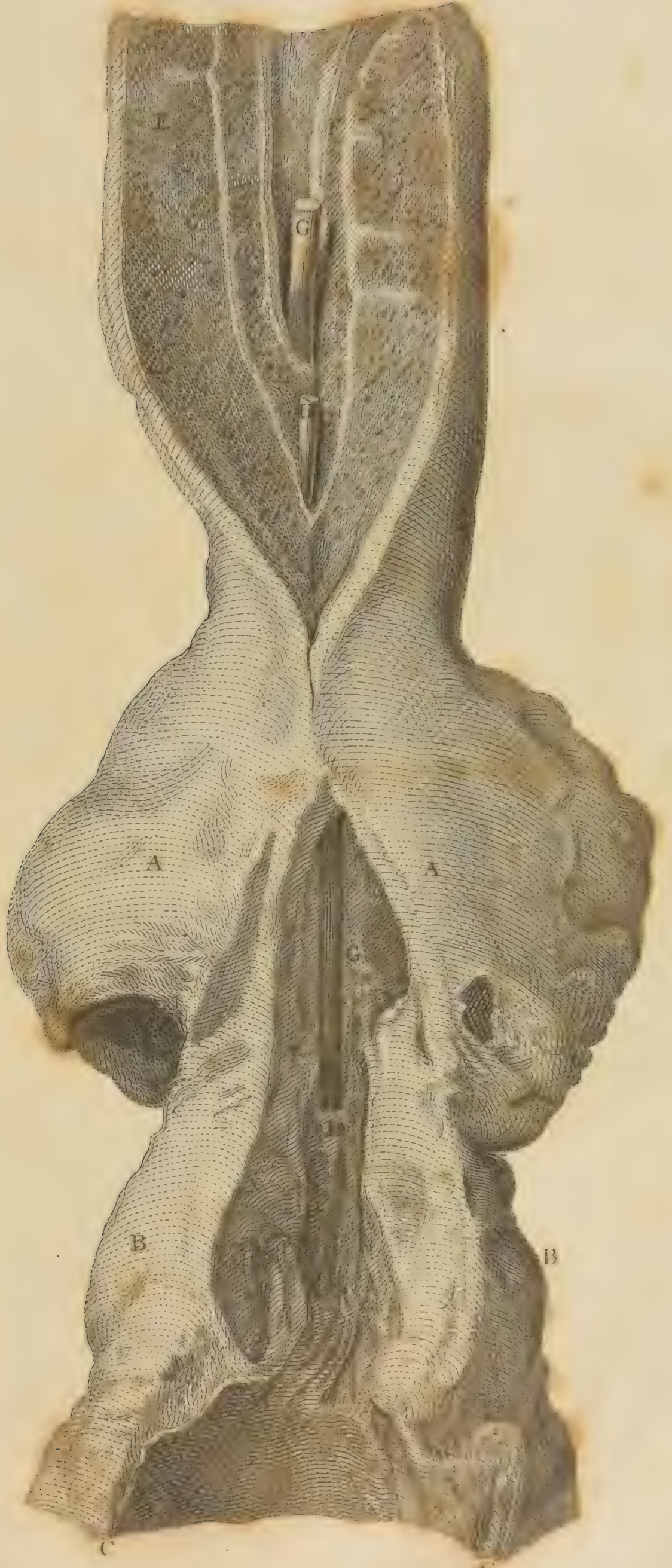
D. The urethra behind the stricture very much enlarged, irregular on the surface in consequence of ulceration.

EE. The cut surface of the corpus cavernosum penis.

FF. The cut surface of the corpus spongiosum urethræ.

GG. The bougie passing from the sound to the unsound part of the urethra.

H. A small bougie in the new passage.



W. Bell del.

Fig. 1.

Fig. 2.

Fig 3.

W.ª Bell del.

Wm. Sharp sc.

EXPLANATION OF PLATE III.

Two canulas for applying caustic to strictures in the urethra.

FIGURE I.

A straight silver canula with the plug projecting beyond the termination of the canula, making a rounded end; at the other end of the wire is a small port-crayon, in which is represented a piece of caustic.

FIGURE II.

A flexible canula for applying the caustic to strictures in the bend of the urethra. The wire with the small port-crayon is pushed out beyond its end.

FIGURE III.

A piece of silver wire with the plug at the end to be introduced into the canula, as in figure I.

EXPLANATION OF PLATE IV.

The bladder and penis of a person who died of a mortification of the bladder, in consequence of a stricture and stone in the urethra. In this Plate not only the stricture is represented, but the thickened coats and fasciculated inner surface of the bladder; as also the small stone which acted as a valve, or plug; besides which a canula is introduced from the glans down to the stricture, showing the practicability of destroying it with caustic.

AA. The bladder cut open, showing its coats a little thickened, and its inner surface fasciculated.

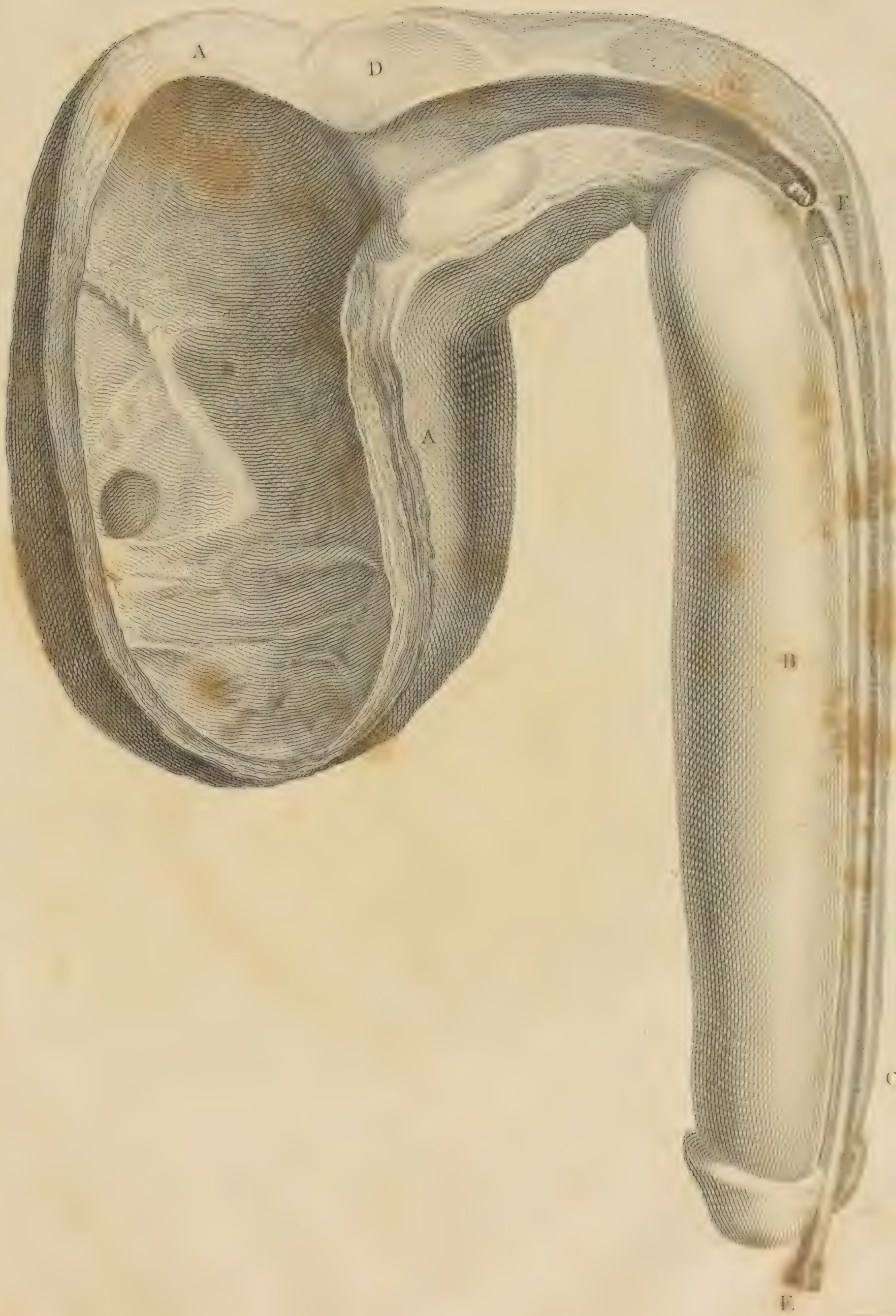
B. The body of the penis.

CC. The corpus spongiosum urethræ cut open through its whole length, exposing the urethra.

D. The prostate gland divided.

E. A silver canula introduced into the urethra, through which the caustic is passed on to the stricture.

F. Points out the stricture with the stone laying above it, so as entirely to prevent the passage of urine.


A
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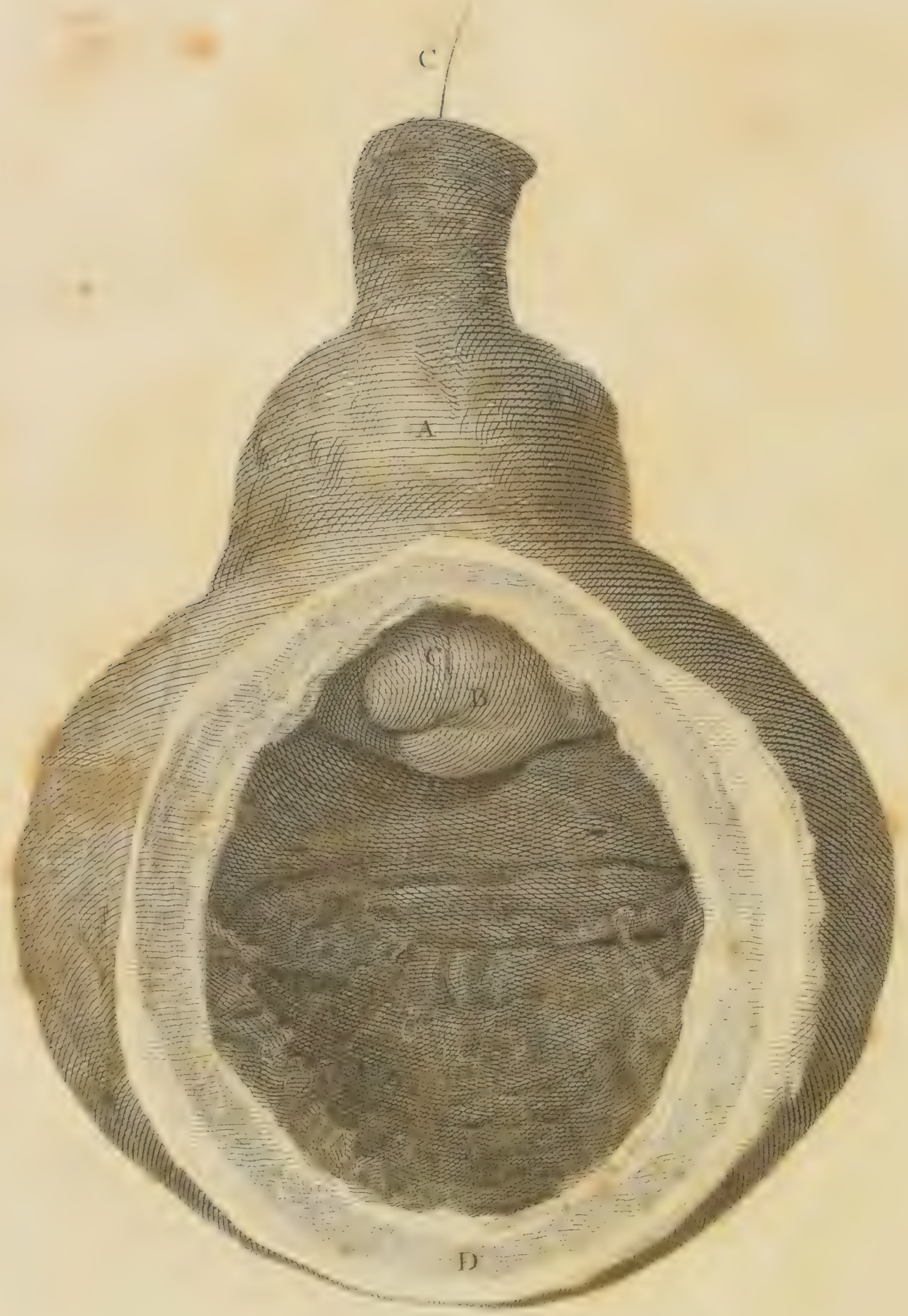
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EXPLANATION OF PLATE V.

An enlarged prostate gland, particularly the valvular process, which has increased inwards into the bladder in form of a tumour, in consequence of which the water passed with difficulty, which became the cause of the increased thickness of the bladder.

A. The prostate gland.
B. The projecting part passing into the cavity of the bladder.
CC. A bristle in the urethra to show it is above this tumour.
D. The cut edge of the bladder, which shows its encreased thickness.*

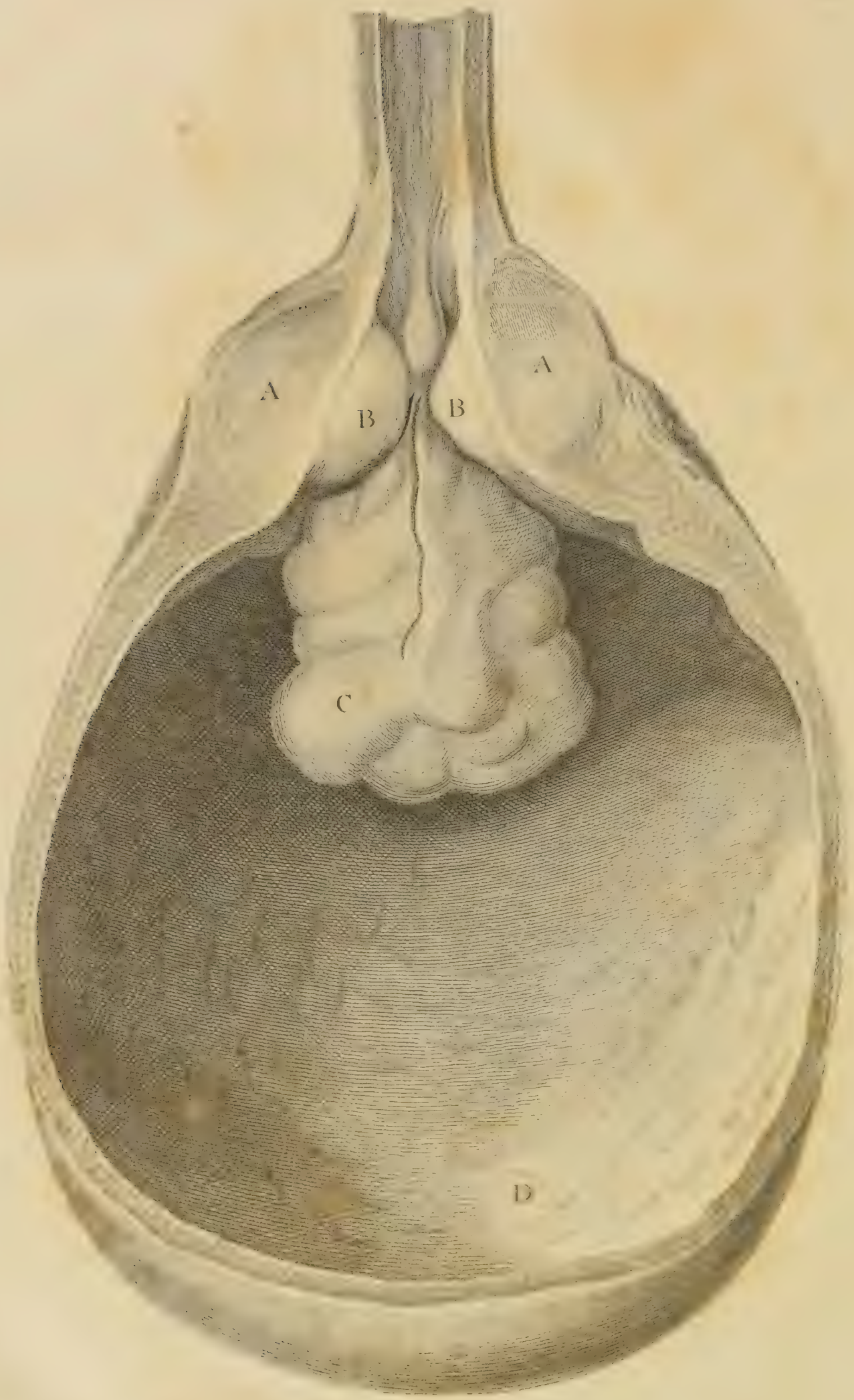
* The preparation from which this drawing was made I was favoured with by Mr. Gunning, and which is in his possession.

EXPLANATION OF PLATE VI.

A kidney whose ureter, pelvis, and infundibula, are very considerably enlarged in consequence of a stricture in the urethra.

A. The substance of the kidney, which is become very thin.
BB. The infundibula much enlarged.
C. The pelvis very much enlarged.
D. The ureter encreased more than ten times its natural size.

A
B
C
D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B
A
C
D

EXPLANATION OF PLATE VII.

The valvular part of the bladder so encreased as to form a considerable tumour, projecting into the cavity of the bladder. The prostate is also enlarged. This tumour had been the occasion of several severe suppressions of urine, and had often been the cause of a failure in drawing off the water with the catheter, by that instrument most probably passing into its substance so deep as to hinder the urine entering its openings. The dark line passing along the tumour from the urethra was probably made by this means, but now collapsed.

AA. The cut surface of the prostate gland.
BB. The inner sides of the prostate gland projecting inwards.
C. The tumour.
D. The cavity of the bladder.

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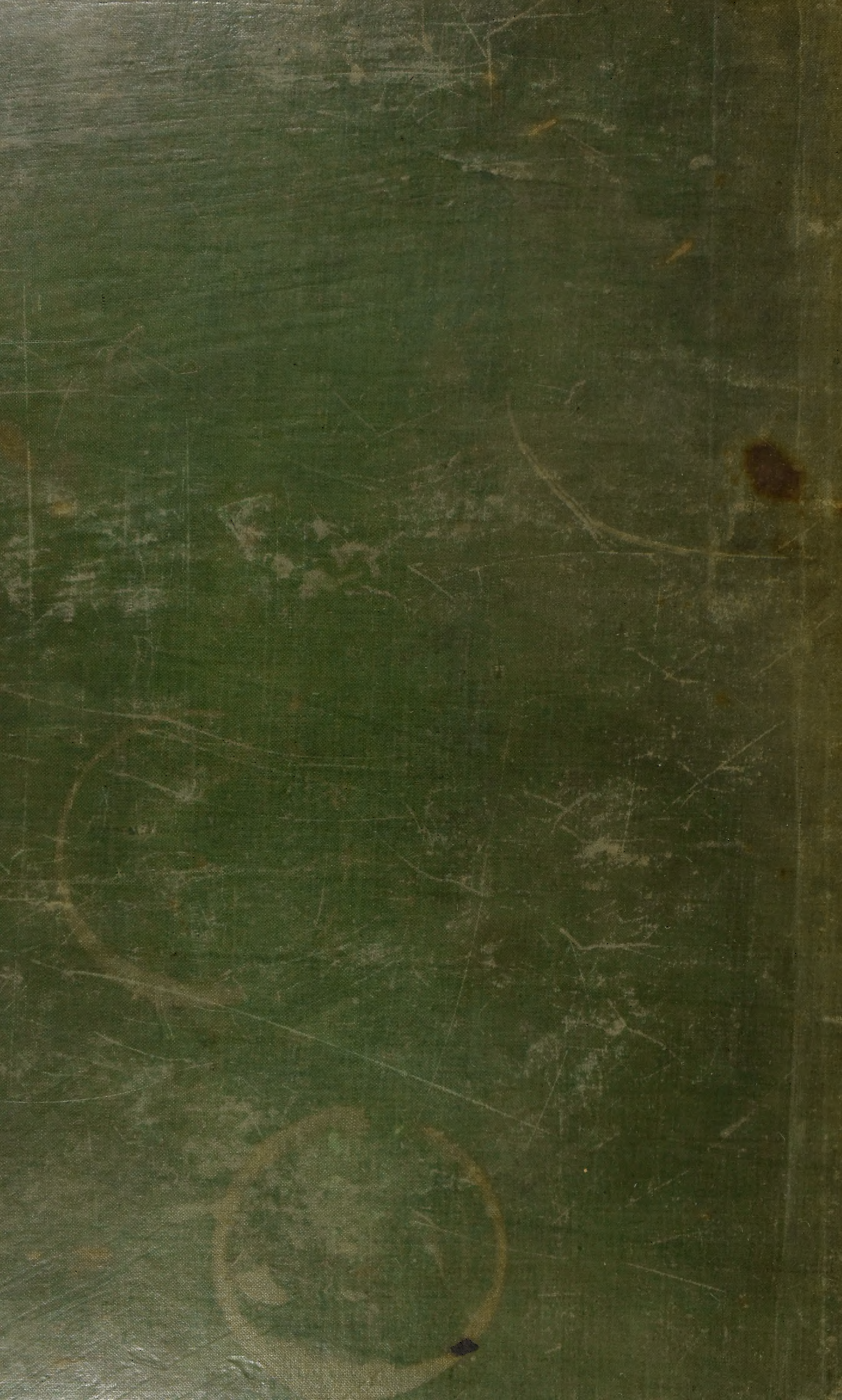
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